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A n n A A A c fb A A A An Ac An A fb A fb n AA .A

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A	G A A A A A A	A
A	A A A A A	A
A	A G A N C A A	C A
A	A G A N N A A N A N A	A A
A	W n A A w A A A W A W A	C A
A	G G A G A A G A A A A A A	A A
A	A G A A G A	A
A	G A A A A N A W A A A A A	A A
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A	A A A N N N A A A A A A	A C A
A	N A A W A A A A A	
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...A	/ / A	G Av A A Ay A	fb AV A n n ;A A ;A A fb A
...A	/ / A	W A fb A w A	fb AV A n n ;A A ;A A fb A
...A	/ / A	w Av A	A w A
...A	/ / A	W A fb A cn A	fb AV A n n A
G A	/ / A	G A	A A A A A

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Y W A N N A

A A A n A A w n A A & A J A A A b A f A A A ; A C A
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f b . A

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A w A A A b n A A w A f A f b A A n A f A A A A & ; A
) f b A c A C A A " A " A A f b A & A A A & A A A A A A A A c A
A A b A A n n ; A A c A A w A A w A n A b A A
A A A A c A A A A A c j w . A

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A A A w A Ac A w A A Afb A fbA ;A....;A A n A A A A
A faw A A ;A A A A A n .A w Afb A An A A
;A c AA n Ac A ffb A An .AA

AA

A A A w A ffb A A A A A A A Aw A A A A ;A....;A
A A A ...A A A w .A A A A w A A A A A c A .A
fb A A A Ay ;A A A A Aw A ffb Afb nA w A A .A A
An A A A w AA A A NA j A A A w AA A A A A Ac A
AA A A A A .A A j A A A A A A Afb A A A
n wn Afb A Aw A Afb Afb A A / Afb A A n ;Ay A
A A Afb A A A n A AA .Afb A A n Ac w A AA w A
A A .AA

A

A j A fb A n Aw A Aw A A A An ;A A A A A
n Afb nA A A An A A A A A Afb .A An A A
w Ac A A A A A j A A An Afb A An A .AA A A A
A w n A An n A fba A A A w A A A A A A
fb .A c A wA A Afb A w A A A Ac A Afb A ;A A A
A A A n A fba A j A w A A .AC fb A A c AG Afb nA
C A A G C ;A A Ay Afb ;A A Ac A A A A A A
A A Afb AA A nc A A AAw c A A An A A A A AA
y .AG AAc A nn A A Ac AA A A AA Afb A A A .A

A

Within scope	Out of scope
<ul style="list-style-type: none">Monitoring and reporting on GHG emissionsEfficient solutions in HDV e.g.,<ul style="list-style-type: none">High-capacity VehiclesDuo-trailersRoad fleet operationsHuman behaviour (eco-driving) etc.AerodynamicsElectric HDV and infrastructureHydrogen HDV and infrastructure	<ul style="list-style-type: none">Light commercial vehicles (Urban Logistics Cloud)CCAM (Digitalization Cloud)Refuse trucks (different operation)Hybrids (not zero-emission)Biofuels (not zero-emission, similar to ICE)

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Figure 2. A fb Afb A A AW A"N A An n A ffb A A
n Afb A ".A

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C A j AA ... A A AW AAfb A A An Afb A A AAAAAA

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cloud reportsA AAc fba A fba An A ;A A A A fbA A AA
w A ;A A & A ;A A wA A A n A A An A w A A A
n n A ;A c A A Ac A A A & Afb A A w A A A
n A A A n A fba An ;A An A ffb An n A fba A
fb n A Afb Afb ;A A w An ;A A A c An A A ;A A
fb A A n An wn A fba A A A A fb n .AA

A

A A A A c A n ;A A A A A A An n A A n A Ac A A A
n n A Afb A A A'N A An n A ffb A A n Afb A
'AA

A

A A A w A A AA A AG A AG ;Ac A A A A & A A A
fbA .A A n A A A Ac A A A w A A A w A
) A fba A j A A Afb A w n .A A A An Afb r A A A
j ;Afb A A ;A An ;A A A A Afb n A A A A A
A j A A;A c A A' y " .AA

A

A A yAA wAc A A A Ay A A Afb Ay A Ac A
Ac Afb A A yA);A Aw A A n A A A An A fb n A A A w A
A A A fba A ;A A A A A w A A n A wA A A A
AA A wAc An n A A Ac A Afb A A A A .AA
A w A A wAc A A n A Afb AAC A A ;A AAA n n A A
A A A A A An A w A j A w c A A n n ;An / A A
A A A An A An n A A A Ay n Afb n n A
.AA

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Afb A A fbaA A A cn A A Ay A A A Afb c .A ;AA n n A
AA AA A A A A A A A Afb Afb Aw Afb A .A A
fb A)w A A Ac A A A A c ;A A A An n c A A A w A
fb A A A w A AC A A .AA



Figure 3. N Afb A A w n A fbaAC A A AA

C A j AA ... A A AA A Afb A A An Afb A A A

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A A n ;A A A ;A AA A An A A A An A c A n A A Ac A
A A) ...AGA c wA A w ;A A fb c An A A A A ...A .A A An A
n c A A fb ...A AA A A r A A An A A Ac A Ac A A A A
A Ac A .A A A A n A ;A A A A A n n A A A A
An Ac A An n n A fb Ac A ;A n A A A w A A ;A A A n A A fb
w A n A Ac A .A

AA A A AA c fb Ac A A A fb A ' A A An .A w ;A
A A w ;A n A ;A A A Ac A A n n fb n A A A A A
A An .A

A

A fb A ;A A A A w A ;A A A A An fb Ac A ; A
) A n A A A w A A .A A An A A A A A A w ;A ...;A A A
A w Aw A Ac A AA A n A .A ;A A A A w A A
Ac A A A A A A A n c .A A A A A An An A fb A
n A fb A A A A n A A A ;A w A A A fb y ;A A
r A w ;A n A A w A Aw .A

A

fb A A fb n A w A A A A A A A A A A A A A
A A An AA A A .A w ;A A fb A A A A A A A A
c fb A fb A A ;A A fb y c ;A A A An A w A Ac Ac A A n A .A
A

A

A A AA A A A A A A A w Aw ;A A A An A
c A A Ac A c A An A A An A fb .A A AA A ;A
A A Ac A w A w A fb n A A ;A A A A w A fb A An A
fb A w Aw A) W ;A A c A A w A A A ;A n A A
n A A ;A A A w fb A fb A A A G A

A

A An A A An An ;A n An Ac n Ac A A fb A A A
n A A A fb An ;A Ac Ac A A A fb A fb A A
A n A .AG Ay n ;Ar A A A A w fb Ac fb A A n AN n c A
A A A ;Ac A A A A A n Ac fb .A A A A A A n fb A
c A A .A A A w A A A fb A A A A A c fb ;A A A
c A AG A Ac ;A AA A A fb A Ac A A A A A fb n An A

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A A A n ;A ;A .// fb ... / n / n A
A .// ... / n n / / / r • • A
.// ... / / c / c w / c
w • A
.// n ... / / n n / c
• A
A .// ... / n n / / / • • A
A A .WA ;A .A .// ... / / / / fb n A

C A j AA ... A A WA A fb A A An fb A A A

A



A

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A ;A Ac ;A Afb A n A A A Aw A ;A Ac A An A A A
n A An .A A A A A A A A A A w A A fb ;A A A
A n A An A A A A An ;A A Afb n A Aw A A A Afb n A
An fb A A A A A fb ;A An Afb n A A fb ;A A A
n Afb n A .A A A w ;A A A A A A Afb n A A A n A
Ac A A ffb An ;A A A A w A n A A A An Afb Aw A
fb n Aw An .A

A A w A fb Afb A ffb A Afb A A A A A An Ac A
fb A A A ffb A A A w ;A;Afb n A A A A Afb n A A A
A A A A A n Afb A ffb A w Afb An A A A A An A
fb Afb A .A

A

A fb ;A Ac A;A A A A n A A A A A ;A AA
c A w A A fb A society where the transportation system is used more resource-efficiently
and where actions and actors are based on the perspective of primarily improving the accessibility within the
transportation system & A n Afb A An A A A Afb A A A A
A A n c Afb An wn ;An A Ac A A A fb A ;Afb Ay n ;A
w A An A A A A A ;A An A A An A A Afb n Aw .A
y n Afb A A A w A A A Afb A A A n A ;AA A
n A A w A A A A fb An fb n A A w A A A A A A A A A
;AwA w A A A A w A A A A n / w AwA n A A Afb
A fb Aw A An n A A A A Afb Aw A A An A A
n Afb n fb A c A A Aw A A c A A ffb A A .AG n ;A
A A A A A ;Ac A w A w A A Aw c A A A Afb
) fb c A A A ;A A A A n Afb A A n A Ac w A A
A A A A A Ay Afb A A A fb A c A A A A
w Ac Afb A A Afb ;A A Ac A .A
A fb ;A Ay n Afb A A ;A A A A Afb A
A A A A n yA A A An Afb A A Afb Afb ;A A A A .A
w ;A A w A A Afb A A Ac A Ac A w A A A A
A .A Afb A n A A A A Ac A c A A ;Ac A A w A
n A A A w Afb Afb A Ac A .A

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Afb A A A Afb Ac A A A w n A A A A A Afb
A Afb A ;A...A A n A A Afb A w AN / n A A
N / n ;A Ac An A ;A A Afb Afb Afb A A Afb A...Afb A A A
n A / An A A / n .A A Afb Afb A A An A A A A
A A A A A ;A A A ;A n .A
;A A w A ;A n A fb An A A n A A A A A
.A w ;A An A ;A fb A Afb n A w A A A A A A
A A A ;A A An A A A A A A A n .A A A A A A
n A w A A Afb An A ffb .A A A w A n A ;A n Afb
n A w A A A ;A A A A ;A A A w ;A
A A n An c A N A .A A ;A A A A An wn Afb

C

A j AA ... A A A A Afb A A An Afb A A A A A

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Aw A A A A A) ...;A A A A An w A A w A A
n ;A A c A A A n A fAw A Afb ;A A n Ac w A
fb ;A ...;A A c An A ffb A w A) ...;A w ;A Ac A A A A .A

A

A A A A Ac A A A An .A A A A An A A A
n A An ;Afb A A Afb A A A n .A A A A Afb A n Aw A A
n A A fb A A An .A A ffb A A A ;A An Afb
n Aw A A A A .A w ;A n Aw A A A A ;A An A A
A A A A Ac n An A ffb ;A n A A A .A An A A
An A A ...;A A n ;A w A A A A .A A n Ac Afb A fb A A
A A A A .A

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C A j AA ... A A A A A Afb A A An Afb A A A A A A A A

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A A A c A A A A .A n A w A A A
A ;A A A fbA A Ab A A fb A A .AAA A

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Diesel truck

A A A AA w A A fA A A A n ;A n Aw A w A fA A A A A A A
A A w An A A An A A A fb .A A A A A fA ;A Ac An A A
w n ;An AA A A A ;A A A A A A A n A ;A A ffb A
A .AA A ;A A A A n A A A A A fb A An .A A A ;A
A A w A ;A n Ab A ;Ab A fb An A Ab A A w c ;An A A A
AA Ab A An .A fb ;A A A n An A fA A A A A n A
A A Ab n A fA A A ;A A A A An A A Aw n A .A A
;A A Ab A fA A A fb A A fb An A Ab AA .A A A A
n An A A A Ab A A A w A Ab A n A .A A A A A A
A n A A A A A A An .A

Battery electric trucks

Aw c A fA A Aw AA A .A A A An fb A w A A
A A A A c A A A A A fA A A An A .A A w A A
A A A fA A A An AA n A A A .A A w A A A A An A
Ab A .AA
C VAw A A c A A A / A .A A An n A A A A A n n Ac A
c ;A Ab A A An .A w ;A A A A A A A c A A A A A
Ab A A An ;A A A ;A A A A A .AA A An A
A n AN Ab Ab A A A Aw c .A
A A A A A A A A .A w A A AA w A A A A c A
c Ab A n A A ;A Ab A A An A A A c An A A w A n A A
A A A A AN AA A A A .A A A A A A n A
Aw Ac A A A fA A ;A A A A ;Ac A A A Ac A A fA
A Aw .A
;A A & A j A A A A fbA An A A A c A A A A
fb A A A c A ;A A fb A A A An A fA .A G A w A A A
Ac A A fb n AA A fA ;An A A .A A w AA A
A Ab A fb ;A A A Ab A A A A c An .A A A A
A A A A A fb ;A n A ;A A A Ab A w ;A ffb A A A
A .A A A c A A Ab Ay n Ac A w w A A A A A A
Ab An n A n .A
w ;A Ac A A A A w AA A ffb ;A A A Ab n A A A A
w .AG AC A A A c A A Ac A Ac A A A A A Aw A
A Ab A w A A An ;A A A A Ac Afb A A Ac A A
fb .A A A fAn A fA A A A n A Ac Ac A A A .A A Aw A fA

A

A .//n ... n / c /A

A .// ...c n ... / /j c w n / n c fb
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A .// ... /fb / • n • • • ... fA

C A j AA ... A A A AA Afb A A An Ab A A AAAA A

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An Ac fbA fAG WA A A An .A A Ay A Afb A AG A Ac A A A A
n .A An Ac Afb A A n A A A A A Afb A A Ac A fa
A A A ffb A A Afb c A .A

A A A Ay A wAn A A A A An A An n A ffb A
A n Afb A 'A A w .A A A Afb A An An A A ;A A
A A A An A A .A
A A Ac fb A An A Afb A Afb A A A A A A A Afb A
ffb .A A fb A A A Afb An A A Afb Afb A .A
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n wn Afa A n Afa A A An A Afb A n A fb .A A w A
n A A A w n ;A A A n A A A A A A Ac A A .A
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A Afb A Ac An w A An A A Afa ;An w A A A ;A A
A A A AV ;A A Aw A N ' A An wn A A w A A w A
n A A A ;An A A A .A
A
A
A w Ac w An Afb A n ;A fb A w A A w A A w A & A j .A
w ;A A A w A A Ay A A w Afa A Ac n A ;A A
w Ac A A c ;A A A Afb .A An n ;A A w An A A
A ;A A n A An A Ay .A
A fbA A A A A A A An .A w ;A A A c A
fa A n A A A ffb A Afb AA A A An Afa An n A A A w A
A nc A w An .A A fb A A fb A A Afb A n A A A A
fb A A A w .A

;Ac A A A A nn Aw c .A A A AA nc A A AA
fb A A Ac A n A An A A A & A j .A w ;A A c A ffb Afb n A
A A A A w A ;An An A A A /fb A A Afb A A An w A A
c A An A A A A .A
A A A A ;A A A A w A A .A A An n ;A A A A
A AA A A A Ac A A A .Afa A Afb A n A A
nc A w A A fba A A A A .A
An n Afa n A A A A A w AA w An A A A w n .A
w ;A A A A A w n A A A ffb A c An A A A ;A
Ay A A A A Ac A A A A A .AG A A A w A A y ;A
n w A Afa n A A A .A
A w n Afa A Afa n A A A A A w A w An A A
n ;A A n A Aw A Afb A A .A

A Afa An n Afa n A A nc AA A A A A A
w c Afa A Afb Afb .A y A Aw c ;A A A A c Afa A A
C A j AA ... A A A A Afb A A An Afb A A A A A
A



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c A.A A Ab A fb A A n Ab A A Ay An A

Aerodynamics						
Load efficiency						
Eco driving electric driveline						
Zero emission Truck and trailers						
Charging and fuelling infrastructure						
Fleet integration and route optimisation						
Ecosystem building						
Digitalisation						

C A J AA ... A A AVAAfb A A An Ab A A ~~AAAA~~ A

A



A

A A w A A A y A w An A A c A fb A fb A A .A A A
n A n A fb A A A A A A w n .A A A ;A A A w AA A
w w A fb A ;A A A A A

Table 2 Barriers hindering efficient and zero-emission logistics

A A A fb A A A A A A	A fb A A A	w Aw A fb A A fb A n A
	A fb n w A A n n A	A A A A A fb An A
n w A Ar A fb A A	A fb A A A fb A n A A	A A n A A A) ...;A fb A n A A A A A w A n A A A A
	A A An w A A A A A	N A A A c A
	fb A A w A A y n A A c A A	n n A A A n A A A A fb A A A
	A fb A A A A A A n A fb A	N c A A A c A A A n A A .A
y A A A A A n A An A	A fb A A A A A A fb n A Ac A ;A A A fb n A A A .A	w A A A n A A fb A n n A
	A fb c A n A fb A fb A n A fb n A A n A c A c A y A n A) ...Ac A c ;A w A Aw A	N c A A A c A A A A fb A n n .A
A	A	A



A

A

n A	A A fA n A Ac A fA Ac A A J c A n ;A n A A A n w ;A w A w A c A A A	A c A fA n A A A A A A J c A A A c A A n w ;A A A A fA A w A c A A A n n A
A fA A	A A w ;A A N ;A A Ac A A A An A A A	A A A A w A A ;A A A A A w A A A n 'A Aw A A fA AA A
A	w A fb n A fb A w w A A A A n A	A w Afb n A A fb A A w w A A A n w A A fA A A A fb A A n A c .A
w A A w A	A A w A A A Afb A A A A w A	A J A A A A w Ac A fA A A A y A Ac A A A w A A A A .A
A	A w Ac w A A w An A fb A	A n ;A / w A A A w A Ac A w A A A A fA w A A A A y Ac Afb A A w .A
A n Afb A A A A A w A	A fA fb A A A fb A	;A fb A A n A A A J A c .AN A A A A fb A A A A c A A fb A A c Ac .A A A A A A A A A A ;A A w c ;A A c 'A A A A fb A c A A
A	A A A n A A fA n A A A	n A J A fb A fA A A A A w A A A) ;A ' A A A A n A A A A

C A J AA ... A A wAAfA A A An fA A A

AAAA A

A



A

		n A fA n A A A AfbA A
A	c A ;A A Afb n A fb A A ;A A A A Aw c ;A A n A A c A A	N A c A A A A c A A A A A A .A A n A fb c A A Ac A fb A w .AC A A A A A Ac An A A Afb A Ac A .A
A	A	A
c A A w c A A n A A A A	A A Afb A A A A A n n w c .A	G A A A w A A n Afb A A A .A
A	c A fA A n A A A n c A A ffb A A fb fb A A A .A	G A w n A fA A n A A A A .A w n A fA n ;A A A c A A A A A .A
fb A A fb A A	A A A w n A A fb A A n A n A Aj A A .A	A G A A A A ;A c A A A A fb A Ac A A A A A A .A
		Aw A A n A c A A .AG A A A A .A w ;A A An A A AA J Ac ;A A fb A AA A .A
		A fA A A w A A w A A A
A	w A fb n A A A n A A A n .A	A A An A A c A fb A n A A A A c ;A n n A A A A A A A A .A

A

C A J AA ... A A A/A A ffb A A An Afb A A A

A A A A A A

A



A

A fA An A A A

A A c A A n A A An A A .A A n A A fb AA
fb n Ab AAA c A n ;A A fA fb A A ;A A A
A An n An A A A A c A w A n .A A
fb n A Ac A Ac A A A w A w A A w A An A
.AA
A A w AA n A fA A A A Ac A A A' w w "A A A
A A A c A Ab A w n A fA fA A A n A .A A
A n A
w A A A ;A
w A A w n A A A j A A A n ;A
;A A A A n A A w A A Ab A c r A A
fA w w An A A
A A A c AA Ab A n A fb A A An A A A An .A A A
Ab A A j A A w A A A A w Ab A A A A w A .A
;A w A A Ab A A A A w .A Ac w A A A A
w Ac A A w A A fA A A w A A A .A

A

c AA AN A A A A A A fA fA A A n A 'A

Aerodynamics	Truck and trailer design	
Load efficiency	Trailer design, Light weight trailers, High capacity combinations	
Eco-driving electric driveline	(Trainings of drivers)	
Zero emission Truck and trailers		Electrification of trucks and trailers, Retrofitting existing trucks
Charging and fuelling infrastructure		AFIR, CEF
Fleet integration and route optimisation		Digital twin (ZEFES, EMPOWER, ESCALATE)
Digitalisation	V2X communication	Bidirectional charging

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A .// ... / / / / n n C... fA

C A j AA ... A A AVAA fA A A An Ab A A

A



A

A

A A A fA A' A A n A w'A) A wA / / A A
A A A A .A A A A Aw A A A A A A n ;A A
fb A w A A A fA A A .A
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A c A A A A Aw .A A fA A AA A A ;A A A A A
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A fA A Aw A fA fA A y;A A A An A A An A n ;A
An A A Aw A n A A n .A y A A A ;A A n A fA ;A
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y A A A fA A .A Afb A A A A A A n ;AA An A
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Past European projects

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f b A A ;A A A A A n c A A A n A w A A A
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A) A A A ;A A A n n A ;A A A A Afb A A c A
A fba Aw A A ;AwA A Afb n A c ;AwA Afb n A A A
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Current European projects

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A c j w A fb AN A j A A A w A An A n A ;A AA W A fb
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n A AA A A A c A ;A A c A .A
A w A A AA A c fb A A n ;A n A n A A An n ;A
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A G AA A A fb A AC VA A AG WA A A A Aw A A A
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fa An Afa A A AA A c .A

A

A .// fb... /n / n/ w c n fb

w n n ffb /A

A .// ...n fb ... / / c fb/ / w c n fb

c fb w n n n /A

C A j AA ... A A AVAAfb A A An Afb A A ~~AAAA~~ A

A

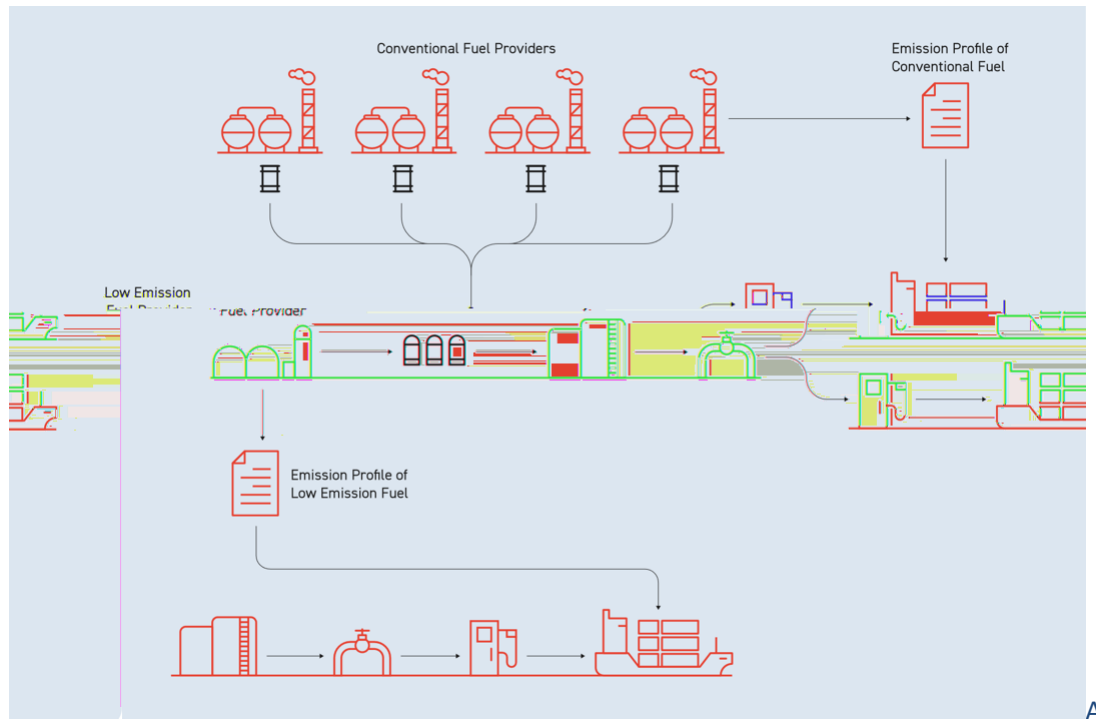


Figure 6.

At A A n A A fA An An AG A ;A A

A

C

A j AA ... A A AVAAffb A A An Ab A A

AAAA A

A



A

A

A A fA j A A fb n A AA A j An A AG A .A A n A fA
A y A A A fbA A & A j A A Ac A A A A c r A A A
A fA A A .A A A n ;A A n A A j A fA Aw A & A j A A A
fb A A A fA A .A
A A) An .A A A A A A fA A j A A A A fA A
w A A A fb ;A A A " n ";A " fA A ";A
" n ";A' An "A A' A fA " .A ;A A n n A fA A
j A A A fA A A .A A ;A A j A w Ac A fb A Ac A
A A A y A .A A A A ;A N A A A j ' A c ;A fA
A y .A
A A) w An .A A j A fA A & A j A A A w A A w A
n A)" ";A"n n ";A" " ;A fb A A A A fb A fA A A A
.A ;A A j A A' "A w A fA A .A fb A A A A
;A A j A n .A
A A An .A A fA A ;A A A fA AA j A A A A .A
N A fb ;A A j A n A A A A
o n A A A fb A A A A y An A A c A :A
o A A A fA A A A .A ;A A A A y A
:A w ;A A A C An A A)AA)A))) Rr ... A fA)

C A j AA ... A A A A A fA A A An fA A A A ~~AAAA~~ A

A



A
N A A J A A A A A A ...A
c A.A w w A fA A A J ;A A A n ;A A A .A



Figure 7.

J A A A n An A fA A A A A w A fA ;A A A
A fA c An .A A A ;A & A J A A c A A A r A fA A A A
A A fA A n .A A A A J A n An A A An A A fA A
.AA
AA y A ;A A A A A A w A fA w w n A A A AA J A A
fb .A An A A A fA r A fA A A A J A A A A A A
w A fA c A A A A A J A .A A A An A fA A

C A J AA ... A A A A A fA A A An A fA A A A A A



A

A

A An A j 'A n A A A A An n A A w Afb nA
n .A fb ;A Afb nA A Afb A A A Afb A w A .A AG AA w ;A
A A A w A A A w w A A A A j A A A A Afb
'N A An n Afb A A n Afb A 'AN Afb nA A A
A An fb ;A A A A .A

A A A A A An An A j A A c A A A j A .A A
n n Afb w A A A Afb ;A A A Aw A A) ;A ;A
N ;A ;A ;A fb ' A A A .A w A A A A
Afb A A .A A y n Afb A A A A A n A .A A w A ;A
A A A A A j A A A fb A A A A A A A A A

A n n A A A .A

A A fb A A j A fb Afb nAA A w A c / A A An n c A
fb nA Afb A Aw A .A A fb A A A A An A Afb A ;A
A A w A A n A Afb A A A c A A A j .A fb A
A An n c A A A Afb A A c A A & A j .A

;A A A) A A A A A A A A A ;A
fb A & A j .A Afb A j ;A & A A A Afb A .A ;A A AA A
A A A A j ;A A A A A Afb A .A

A

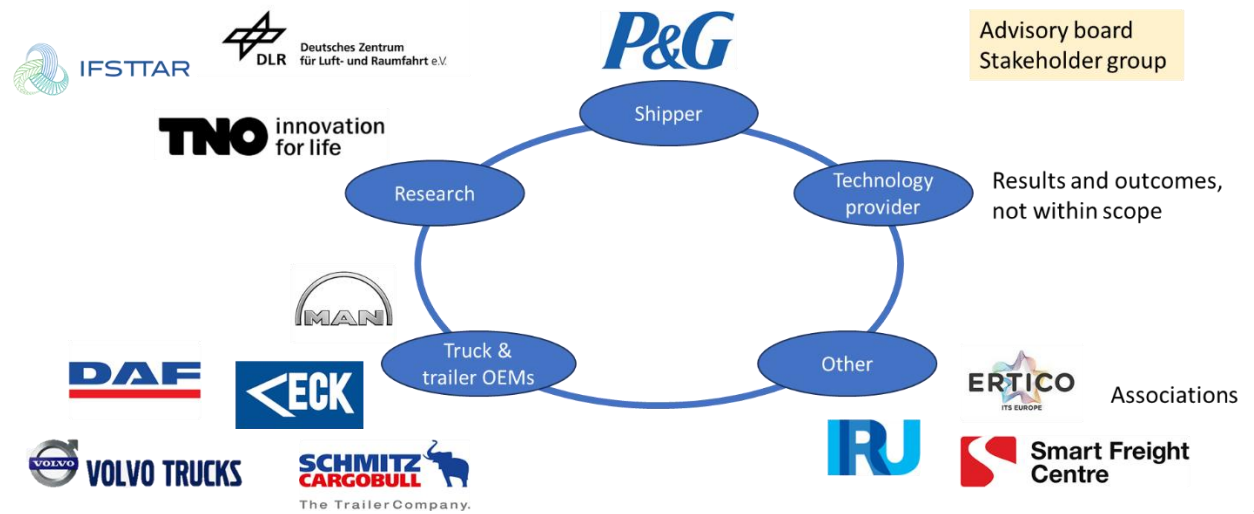


Figure 8. w w Afb An A A A A A & A j A A A w w A
n .A A A A A An Afb A w A A A
A w w n .A fb A A An A A j A fb A A A
c A A A An .A

A

A



A

A

A

A A c AA Ay An Ab A c AA A A A A A A A J A
A A A A .A
c AAy An Afb A A J A

A	An / Afb A A n / Afb A	G N ;A G Y;A A
A	A A A Afb A	G N ;A G YA
A	A Ab A n A A	G N ;A G Y;A W;A N A
	A w A A	N C A
A	fbA A w A A w A A	G N ;A G YA
A	n c A A A Aw A A A An A	G N ;A G Y;A N C A
A	;A w Aw ;A W Y;A fb A	N C A A

C A J AA ... A A AVAAfb A A An Ab A A ~~AAAA~~ A

A



A

A

A

A WA j A n A A A A A fA A Ac w Ac A n A A
A Ac w A A fbA .A A j A Afb Ac AG ;Ac A A A ;A AA
n A A fA A ;A AA Ac Ac A ffb A A ;A Ac A
y A A Aw A A .A W Afb A A A .A A fb A fA w A
n A An w A A fb ;A A A A fb A fA n A Afb A A n fb A
n A Afb A n A An A A ffb An A c .A A j A
;A A A A A Aw ;A A n A A w A A ;A A
A A .A A j A AA A A r A n A A w A A A
A c w A n A A A Aw .A Aw A A Ar A AAn A
n A c A fA n A fb A c Acj ;A A A ;A A A .A
WA A w A A fA A A A w n ;A A WA c A A A
c w A .A A A w A A A A An A A w A A A
A Aw A c A A w A A An ;A A ffb A fA w A A A
w A A A A ffb A fA w .A A fA A A A A A fb A A
A A A Ac A Ac A w A A A A A A w Ac A A fA
A fA A A A A A A fb Ac Aw A .AC w A A
;Ac A A A A A A A w A A w A A Aw A A A
c w A A A c Aw A A An .A nn Afb A An A
A fb n A fA An A A An A A A ;A A A A fA w A n A
A c A A w ;AfB A A n A n A A A fAw A A A fbA
A A n A A A n ;A n A w A A A A ;A A w fB c A
A w Ac A A w A' .A A A fAn AA A A fA A fb A
A A A w A;A A ;An w A A ;An w A ffb A A
n A A nn A Aw .A ffb An n A A Ac A A w A
n A w A) A A ffb .A A A A A n ;A n A fA A w A A ffb A
c fB A nn A Aw A A w A fb .A

A A G N A j A A n A A A A A n A A A A ...n A
A A A A ; A A w A ; A A | A Ab A w .A

A A f b A A A
n A A A A A n A f b A Aw A n c A
Aw A A A fb n A A w An w A n Ac A A An A
' c n 'A A A w A

A A A j A w A A A A Aw A A n An wn A fa
A A nc .A AA A A Afb A A Ac n A A An A n A
n ;A A A Ac A ' ;AA A A A A A Aw n Aw c Afb A
A A n n A A Afbb .A A A A w Afb Ac A ;A A
;Ac A A A n A c A fa fb A .A

C A | AA ... A A ~~AA~~AA~~ff~~b A A An ~~A~~b A A A

A



A



Figure 9.

[illegible]

A A fA G YA A A n Ab Ab A A An n A A ;A A A A
 n A A A A A ffb .A fb fby c A A c Aw A A A A
 A n A n A A w .A A AA c 'A A A A A A fb A
 A A .A A ;A A A ;A ffb A A fA A fb A A fb A
 n A A w .A

A_n A_{c_j} w A $.A$

w A A A fb A An fb A A
n w A fb ;A n fb ;A A ffb A An n A c A A AA A ;A
n A A fa A n A A An n An wn A
fb A fa n n fb A w A A w fb n A A A A A
n A fb yc Aw A A A A A
w A A ffb An wn A A A A A A A A .A

_____A

A .// fb y | ... /A

A

C A J AA ... A A ~~AA~~ ~~AA~~ ~~fb~~ A A An ~~fb~~ A A ~~AAAA~~ A

A



A

A

A n A f A j A .AA A A f A f b A n A ;A A A n A f A A N A
n c ;A f A A A A f b A A f b A n w n A) w A A n n A
;A N A A A A A n A n w n A) n A f b A f b A A n A
w A G W;A A A ;A n A A ;AwA n A f b n .AA

A j A A A f A A n ;A A N A n c .A A f b A n c A A A N A A
) A n c ;AAy A A A n c A A A A n A A A A n A A
w A A A G N A j .A A n A A A A f b A A A c j A A
w A A A A n ;Aw A A A A A f b A N A A A w A f b A
A A A n A A A .A A A f b A n ;Ay A A A/ n A
A/ n ;A A n A A A A N A n c A A A A N A A f b A f b A A
A A f b .A A c A w A f b A A A A A A ;A w A A
c A A A A A f b A A A/ n A .AA

A A n A A A N A A n c ;AAy A n A A A n A f b n A A
G N A j .A A n c A A n A A A A n A f b .A
n A A A A A A A A A A A f b A A A A A y .AA

A w A A A n A A n A A A) ;A n A A A) n A
A A A A n w A N A .A

A n A A f b A G Y A A A N A A A w A w A f b A A A A f b A A
A f b A n A .A N A A n c A A A A A .A

N C A n A n c 'A A A n w A f b A n ;A f b A f b A A A
.A A A f b w A A f b n A f b A A A A n A A A f b A ;A
A A A .A A j A A A A A f b A A .A A n A A n A f b
A j A A c w A C A n A A A n A f b n c A .AA A N C A
j A A A / A A A A n A .AA

A A f b A A f b N C ;A A ;AA f b A A A f b A A n .A A
A A A A ;A A f b A A A n n A A A A A n A n A
A A f b A w A .AG ;A A A A ;A A n c A A A A A A A
A A c A .A

A A n A A w ;A A A A n .A n n ;A A f b A A A A w ;A A A
A A A w A A f b A A f b A A A f b A .A A A f b A A A ;A
A A A f b A A A w A c A A A c A A f b A .A w ;A A
A A y A A A f b A A A A A A A n A A n A A c A
f b .A A A w A c f b A A A A f b A f b ;A w A A A A A w A
n A f b A A f b A n A A n A A f b A A A .A

w ;A A w n A A A A A A A f b A A A A A A ;A A A
w A A A w A c A A A n ;A A A A A c A A n .A w ;A A A A
A A A f b A A A A f b A A f b A n n A ;A A n A A A n A
.A A ;A A A A f b A A w A w .A

A A A n A ;A w A A A A A A n A A A A A .A A
f b A w n A A A f b A A A A A A f b w ;A A A
n A n c A N A

C A j A A ... A A A A A A f b A A A n A f b A A A A A A A

A



A

A



Figure 10.

An c A A A w A A n A A A NC A
J 8

N A A w A A c A A A Afb n A A Afb Av A A A
A Afb n A w Ac w A A An A A A J Afb n A A A
A A A A ;Afb n A A A A A A A ;A A
A A A A w ;Av A n An fb ;A A A A A ;A A
A A A A
A A n Afb A A A A
) A A A Afb w Ac w A A A Av An ;Ac Av Av c Afb A
w Ac w A A Av c AA ;A A A ;AA
) A A w Ac w Av c A A A ;Ac A A A n ;Ac A w A
n n Ar Afb A ;Ac A A An A Afb Afb w Ac w ;A
) A A Av A n A w A An A Afb A An A w ;A
) A n A n A A w Av A A A A A A n A
) A A A Afb w Afb c A A C A A A A w A A
A Afb n A A ;A A
) A A A An Afb A fb A
Afb n AN A A A w A A A A A A An A A A A
A w ;A A A w A A w An A fb A

A

A n Afb G A A A w An A A A A A A A An Afb n A
fb A A w A Afb An Acj w A A A A A An A Ac A Ac A A
;A A A A A n A ;Afb A A J A Afb n A A A ;A A

C A J AA ... A A AVAAfb A A An Afb A A A A A A

A



A

A

j A ffb A) Afb nA AN W;A r A A A A w AC A) C Ac A A A
A A A j .AA

An A n A fba A A CA A A j A A A A A A j ;Afb A A A A
A w A A fb ;A A CA r A A A A fba A j Ac A .A An A
A A A A CA fb A A An n Ac A A A A fba A fba A A
n .A A ffb An A A ;A A An ;Afb nA N ;A A A A A ;A A
Afb A ffb A Ac A ffb A .A A A A A n A A ffb A A
A ;A A A A An A A .AA

fb A Ac A A ;A A CA A A ;A A A fba G A A A A
A An Afb A A An Afb A .AA
An A ;A A G An ;A A A A A A n n A fb A A A A A ;A
A A A n An Afb A An Afb nfb A A .AA

j A w c .A

- y An A A Afb A A fba c Afb A fba A A ;A w c A A
...;A G A j A c AG A fba A ;A w ;A ;AN ;A ;A ;A ;A
C n ;A ;A A ;A ;A ;A ;A A
- N Afb An A A AC A ;An A Afb A ;A w c A A
...;A G A j A c AG A fba A ;A w ;A ;AN ;A ;A j A ;A
C;A ;AN ;A A
- n A A A fba y A A A A An ;A w c A A...;A G A
j A c AG A fba A ;A A ;A ;A ;A ;A w ;A ;A ;AN ;A ;A
w ;A ;AN ;A ;A A
- A ;A w c A A...;A G A j A c AG A fba A ;A ;A ;A w ;A
;AC ;A ;A w ;A ;A n ;A ;A ;AG ;A A
- A A n n A A c A n A fba c Afb A A A
A A n c A ;A w c A A...;A G A j A c AG A fba A
;A w ;A ;A w ;A ;A ;AN ;A ;A A

A

G Afb Ay ;A A A A A n An A
A A .AA

A A An A fba A G A j A An AG A A) G A Afb Ac A A A A
n n .A A n A fba A A A A c A A Afb A A Afb A
n A A A c A w ;A A c A An A A A Afb A n .AA A
A A w A A A fba A G A n ;A A A CA A A A A
A A c A fba AG A A A j Ay ;An Ac A A A An A
A A C.A A A ;A G A A A A A fba n A A An A A w A
Afb ;A A A G A CAc n A Afb An n c A fba A A w A A A n A
Afb n c A A A A .AA

A A fba G An A A A fba A c A A fba A An A A
Ac A An AG A .A A A A n A A A AG n ;A A y A A A A A A
A A j .AA

A

A A Afb A .A A n AN) Afb AA .AA fb Afb An A
fba A .A .A .// ... / c / /w . A

C A j AA ... A A A A Afb A A An Afb A A A A A A A

A



A

A

A A G A AA A A ;A AA A A A n An ;A A A
AA A .AA
A A A A A c A fb A AG n A A A Ac A A .A A
A n n A A An A A n A fb A A A A n A A A A
.AA
;A A An Acj w A A fb .A
... A An A A A A A A A .AA
... w A A AG n fb n A A A A A A ;A n A A A
.A
A j A AA n n A A .A An A A A n A A A A A
A A An A fb A ;A A A A A A fb A AG n A A
A .AC A A ;A A j A A A A A n ;A A A w A
A A ;A A A An A A n A AG A n .A n Ay n ;A A N A
)G ;An A ;A A A A An A A n A ;A A A A A A
A AC .AA
Ay A A A A ;A A n A A A A A .AA
A ;A A n A A A fb A n A A A A n n ;Ac A A A
fb A A A .A A A fb n A CA ;A Ac AW A A A A
A G A A A A A A n n ;A A A A A A A w .A A
fb fb A A A Aw Ac n A j An fb A A A A A A fb A
fb n A A A .AA
n A fb A A A n A fb A j A A
• AG n Av A
• n A A n A A
• A fb A A A A
• A fb A fb A w .AA
A j A w A G A An A n A AA fbA A A w A A n A
n A A A A ;A A A A A w A Ay A A A n A
A w .AA
A A j A A Av A Ac A fb AG WA A w A n An c fb A w A
A A A A fb fb A A n n A fb AG W .A
A A j A n A A w A A A AG WA Aw A Ac A A fb A
.AC n ;AG ;A n A A .A A A fb A Ac A n .A A A
A A A A A A n c A A Av A fb A .A
A ;A A A fb A A fb A A Ac Ac A A .A Ar A w AA
A A A fb A A AA A A fb Ac ;A fb A fb A A A .AA
A A ;A AC n A A ;A Ac A A j A .A A A Ac A A n A
A c Ac A A n .A

A

[A RG F J y F G](#)

A

C A j AA ... A A AVAAfb A A An fb A A A

A



Figure 11.

A A n ;A AA c A A A A A A A w AG VA A n A
fb nA A A fA .A A A A A w A A w A w A A A & A
J ;A A fb ...A A NN .ABB
8
A

_____A
A RG F J y F Gy y y y y y y
A
A RG F Gy y y y y y y
A
C A J AA ... A A A A A A fb A A A n Ab A A A
A



A

A A A fb fb A A n .A A ;A fb A A A w An n ;A A A
A ;A AA A fb A w A n A A A ;A fb A n ;A c A A
A A A A j .AA

- A A G A j A A A w A
c fb c A AA A A n A j A ;A A A A A n A A
A A A A A A A A A A A fb A j .AA

A ;A A w A A A j A A A w ;A An A ;A A fb A n 'Ay A fb A
A A Av fb n A A j .AG n A A A A A j A fb :A A A A c A
:A A AA A fb A A A A A A An fb A A A ;A Ay A A
A An n c A n w .AN A fb A n A w A A A A A A A ;A
n AG A ;A A A j A A A A A A .AA

A A A A A fb A j fb n A G A A A A A A A y A
w .A A G A A fb n ;A A A A A A n A A An A A c .A A
A An AG A A G A A A A A A fb A A n A A AA A n A AA c A
fb A n ;A A n A A A A A A A;A AG A A A A
);An A fb A n .AA

G A A fb A fb G A A A A A A w Ac ;A A A A AN W ;A
A A
A w Ac Ac n A A c A An A A A w Ac .A A G A
fb n A A A Ac n An A A A fb n A fb A AG n A c ;A A
w A fb A A A Ay A A A An A A A Ac A
.AA

An .A

- fb A j A ;A Ac AG ;Ay A A AG n An A w A A
A Av A A w A fb A n A A A .A A c A A A
A A A ;A A A ;A AA A A A A A A n A A
- A A fb A A A A A Ac A A n A n A ;A ;A Ac A A G A
j A A A .AG A A A A A An A A A j An .A
A A A A c A A .AA
- A n A A ;A c A A ;A A A A A A A A A
n .AG A A A A A A AN WA A A A w .A A
fb An fb A A A c ;A A A n A A Av fb A fb ;A
A fb A A A A A An An fb A A A An A A A
A .AA

A A n A A A A A w A A A ;An A A A A Ac A
A A A An n A A A A .A A A fb A A A c A
A fb r ;Ac A A fb An n A fb r .A An A
n ;AA Ac A A A r A A w A A A A fb A A A fb A
n 'A A w A ;A An A .AA

5.2.2. TRANSFORMERS and AEROFLEX: Innovative trailer and e-axle

A w A j A G N A A G YA A A An n A .A A
w w A A A A w A y .A A A Ac AV A A A A G N A
A n fb A n A A A Av n AA A n A .A A A A A A
A A A A A A n A Aw A A An A fb A j .A A A
C A j AA ... A A AVAAfb A A An fb A A A A A A

A



A

A A j c ;A c Afb A n ;A A A c A An .A A c Afb A A ;A
j c A A A A A c Afb A Ac A A A Ac A Afb fbA A .A A Afb A A
fb A A A Ac A j n A A Afb Ac A A A A A A ;A A A y A A
Afb .A A ;A A fb A Ac A A A w A An A n A .A

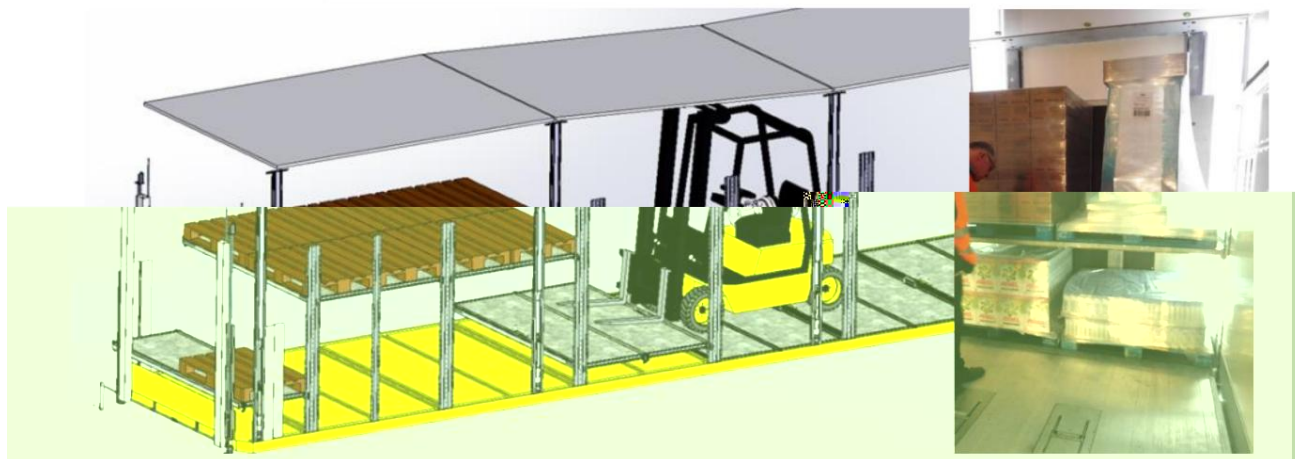


Figure 12. A w w A A A n w c A A b ; A w A A A G N A
A G Y A | . A

G A G YA A A A An A A n c A A A An A A A
A .AA n c A A A A A w ;A A A A A w AN ;A An A
n Ab A A AwA n A A n A A A A A A A n A A
wA A A fb A) A A A n A A A fa A A A wA y A A
n n A A A A A A w A fb AA A Ab A n .A
A A A G YA j A Ab ;A A AA n A A Ac Ac A A An .A A
AA A Ac A Ac A A A n .A A A A n A fa A w ;A A A A
A A A wA y A AA nn A fa A A N .A w ;A A A
n AA G N A A G YAA Ab A A A A w A An A A A
nc .A

5.2.3. H2Haul: Hydrogen refuelling stations for trucks

A An n A A A A fb A A A A fb A A ;A A A
;A A A A A j .A A A AG N AG A fb A r A A fb A A A
A A A A fb A A .A ;A An fb A fb A A A A An fb A A / ;A
A A A fb A A A An .A w ;A A A A A A A A A A w A A
An A A fb A fb c A A c ;A An A A A A A A A A A w A A
A c .A
fb A n A A Ac A A A w n A fb A w A A An A ;A
fb A A A w fb n A fb A A .A

A

A .// .w ... n / fb y w n n w /A
A .// n .n ... / fb y/A

C A J AA ... A A ~~AA~~ ~~AA~~ ~~fb~~ A A An ~~fb~~ A A ~~AAAA~~ A

A



A

A

A A A c A ;An A n A fA A A A j A w A w A A Afb c Ac A
n A A A j Afb n .AG A A A' w "A n A fA A A A A
A w .A A n A A fb n A fb A A G N ;A G Y ;A
N C ;A A AN .A A A A A A A A A A A A j A A
fb fb A A A r n .A

A A A A A A A w w A fA A fb A An n A A A A A
A A An AN A An n A ffb A A n Afb A 'AA .A A
A n A Afb Afb AA fb A j A A w A A A n n .AA
G n A A w A A A A fA Afb A & A j ;A Ac n A A Afb A & A j A
c A ffb A A n Afb A A Afb A Afb .A

A w A

A

w Afb n A

A A

n A A

A n A Afb A w n A fA A c A fA n An w n ;A
A A A w A A fb .AG A w A A A c A fA A n A
A w A ;A A Ac A .A ;A w A A A fb AN ;A n A A
A A A A A A A .A & A j A A A Afb A A A c A
fA A An A A A A fb A A .AA

A A A A A & A j ;A A A A Ac A ;A A A w A
Ac A n A An n A A AfbA .AG n A A A n A A A AA
A n A A j A w Afb n A A w A A n .A fb ;A A w A fA w A
fb n A A A A A A c .Ay A A A) A A A w A Ac A
c fb .A

A c A fA n A A n c A A A A w c A fA fb A
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A Afb A A fA n A A A A An n A fA Aw A Afb A
;A A Ac A A A .A A An n A n A Afb A A A
A Afb A A A A A A A A) A n ;Ac A fA /fb A
' .A A Aw A A A n n A A A WY A Ac A .A A A
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w A A Ac A A A A A Afb A A Aw c Ac A .A & A j A A
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c A fA n A A A A fA A c A A fA A A .A
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Document elaborated with the support of the BOOSTLOG project has received funding from *the European*
under grant agreement No 101006902

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
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cj w ;A A A A A A A ' A n w .A A J A A A A A
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A J A A A An A ;A fba A A Afb Afb Afb A n n .A



BOOSTLOG INFORMATION SHEET

Project name: BOOSTing impact generation from research and innovation on integrated freight transport and LOGistics system (BOOSTLOG)

Starting date: 1 January 2021

Duration: 36 months

Total funding: 1 M€

Project type: Coordination and Support Action (CSA)

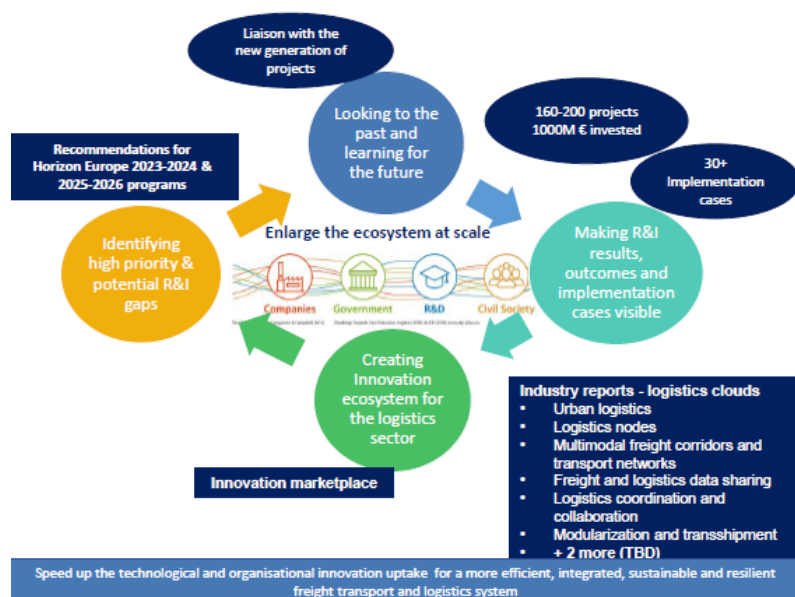
Programme: Horizon 2020

Topic: MG-2-13-2020 - Coordination and support for an integrated freight transport and logistics system

Webpage: <http://www.etp-logistics.eu/boostlog/>

Contact: info@etp-alice.eu

Transforming European freight transport and logistics R&I ecosystem to perform optimally and enhance impact generated from R&I investment for contributing to sustainability and competitiveness



Coordinator



Consortium members







Bridge steps needed to enhance impact of R&I projects

The BOOSTLOG project has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement No 101006902



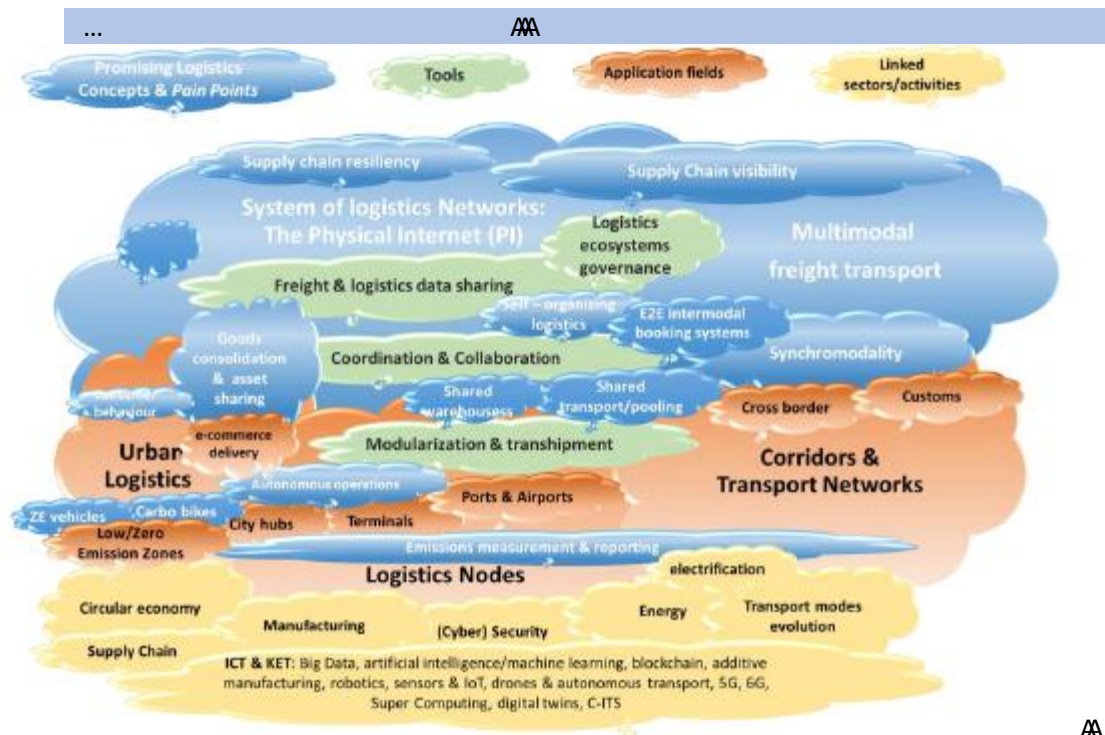
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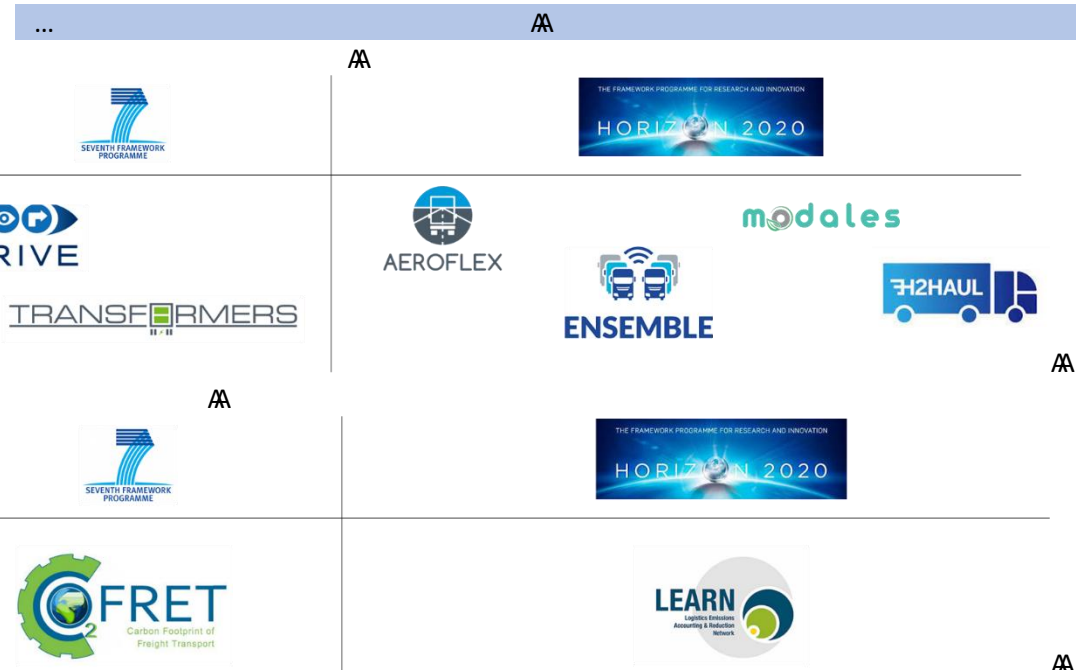
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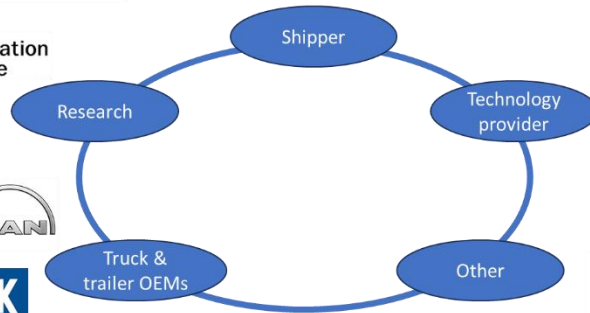
Deutsches Zentrum für Luft- und Raumfahrt e.V.



VOLVO TRUCKS



The Trailer Company.



Results and outcomes, not within scope



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- w ;A AA A A A A j A A n A fbAA
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▪ A
- A A A n A c A A A A n A f b . A
▪ G f b f b A w n . A
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An n A .A
c A.A A fA w ;A A A A A j A A w A A A

Ac c A	G N A	& A
C A w A	A	A A A A
Ac A	G Y;A G N ;A G A	W A A A
W A A	G ;A A	A
N A n A	WA	A
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A A	G ;A A	n AG A A
AN A	G Y;A G ;A y A	A
A A	G ;A A	n AG A A
N A r A	NC ;A G Y;A G N ;A G A	W W A
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AW A A A	G Y;A G N A	A
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