

Intelligent Transport Systems - iCargo

The Commercial Benefits of iCargo

Simplifying Multi-Modal Transport by Breaking Down Barriers

- Role Definitions.
- What Is iCargo & How Does It Work?
- How Does Each Role Participate?
- What Are The Benefits of iCargo?
 - Quantitative.
 - Qualitative.
- Flexible Business Models.
- Deployment Model.
- Conclusion.

- LSC - Logistics Service Client (responsible for purchasing of logistics services).
- LSP - Logistics Service Provider (responsible for providing of transport and logistics services).
- FSI - Freight Service Integrator (responsible for providing of combined logistics services).
- ISI - Information Service Integrator (responsible for providing of the information infrastructure).
- TNM - Transportation Network Manager (3rd level party which provides traffic and infrastructure status information).



Making use of iCargo developments- Application of Intelligent Cargo in Efficient and Sustainable Global Logistics Operations

iCargo will design and implement a decentralized ICT infrastructure allowing real world objects, new planning services including CO2 calculation capabilities and existing systems to co-exist and efficiently co-operate at an affordable cost for logistics stakeholders.

The **iCargo** project aims at supporting new logistics services that:



- Synchronize vehicle movements and logistics operations across various modes and actors to lower CO2 emissions
- Adapt to changing conditions through dynamic planning methods involving intelligent cargo, vehicle and infrastructure systems and
- Combine services, resources and information from different stakeholders, taking part in an open freight management ecosystem.

What is iCargo?



- A network where LSPs / FSIs can publish their services and schedules and FSIs/LSCs can discover them.
- Easily compare options, including price, transit time, and carbon footprint reduction.
 - Leverage either list pricing or contract pricing.
- Book a shipment across all modes / legs of transport required to get from origin to destination.
- Track shipment from end-to-end, with automated re-booking if required.
 - Including updates from LSPs, FSIs, and TNMs.
- Simplification of invoicing, auditing, and payment.
- Enables alerts, reports, and analytics.

- LSPs and FSIs publish schedules:
 - Transit times.
 - Pricing.
- Automated carbon footprint calculator.
- Ease of comparison for LSCs and FSIs.

Powered by   Login

Search Matching Transport

Origin:
 Destination:
 Total Payload(T): ton Tare Weight(T): ton
 Equipment Types: Container 20DV Container 40DV Container 40HC Semi Trailer
 Product: Hazardous Material
 Departure Date:
 Required Delivery Date:
 Sort By:

Returned 6 matches.

Route	Origin	Destination	Departure	Arrival	CO2/Saving*	Cost	Dist.	Equip.	Product	Duration	Action
1	BORLÄNGE	ZEEBRUGGE	Thu 16 May 2013 12:08	Wed 22 May 2013 12:00	1.127Kg/250%	2,500 Euro	1,271 Km	Container 20DV [5]	Any	5d 23h 52m	Leas Book
	Id	Origin	Destination	Departure	Arrival	Mode	CO2/Saving	Cost	Dist.	Max Pl.	Carrier
	1191	BORLÄNGE	GOTEBORG	Thu 16 May 12:08	Thu 16 May 21:01	Rail	404Kg/182%	2,500 Euro	367 Km	12t	Booking System - Green Cargo
	1072	GOTEBORG	ZEEBRUGGE	Mon 20 May 23:55	Wed 22 May 12:00	Sea	723Kg/287%	0 Euro	904 Km	20t	Booking System - Cobelfret
2	BORLÄNGE	ZEEBRUGGE	Thu 16 May 2013 12:08	Mon 20 May 2013 06:00	1.127Kg/250%	2,500 Euro	1,271 Km	Container 20DV [5]	Any	3d 17h 52m	Leas Book
3	BORLÄNGE	ZEEBRUGGE	Thu 16 May 2013 20:30	Wed 22 May 2013 12:00	1.127Kg/250%	2,500 Euro	1,271 Km	Container 20DV [5]	Any	5d 15h 30m	Leas Book
4	BORLÄNGE	ZEEBRUGGE	Fri 17 May 2013 12:08	Wed 22 May 2013 12:00	1.127Kg/250%	2,500 Euro	1,271 Km	Container 20DV [5]	Any	4d 23h 52m	Leas Book
5	BORLÄNGE	ZEEBRUGGE	Fri 17 May 2013 20:30	Wed 22 May 2013 12:00	1.127Kg/250%	2,500 Euro	1,271 Km	Container 20DV [5]	Any	4d 15h 30m	Leas Book
6	BORLÄNGE	ZEEBRUGGE	Sat 18 May 2013 12:08	Wed 22 May 2013 12:00	1.127Kg/250%	2,500 Euro	1,271 Km	Container 20DV [5]	Any	3d 23h 52m	Leas Book

© Copyright IntelliTrans 2013

Simplification of Booking - Continued



Welcome Icbs StoraEnso @ Stora Enso Search | Logout

Powered by **IntelliTrans**

Home Bookings

Transport Booking Form

Booking Details [1000]

Status: Pending

Booking Date:

Booking Reference:

Terms of Delivery:

TOD Location:

Hazardous:

TOD Text:

Shipper Instr. 1:

Shipper Instr. 2:

Shipper Details

Company Name:

Address Line 1:

Address Line 2:

City:

Postcode:

Country:

Contact Name:

Contact Phone:

Contact Email:

Contact Notes:

Reference:

Consignee Details

Company Name:

Address Line 1:

Address Line 2:

City:

Postcode:

Country:

Contact Name:

Contact Phone:

Contact Email:

Contact Notes:

Reference:

No.	Type	Unit Number	BOL Number	Seal	Seal 2	Cargo Weight(T)	Tare Weight(T)	Goods Description	Remarks
1	Container 40DV	MRKU8108865	AJH1/WB1	024446		20.0	0.0	Paper Products	
2	Container 40DV	CMAU1852393	AJH1/WB2	497569		20.0	0.0	Paper Products	
3	Container 40DV	GATU1183522	AJH/WB3	505893		20.0	0.0	Paper Products	

Leg	Shipper Ref.	From	To	ETD	ETA	Carrier	Carrier Transport Ref.	Est. Leg Cost	Est. Leg CO2
1	IB000010001	BORLÄNGE	GOTEBORG	Mon 18 Mar 2013 12:08	Mon 18 Mar 2013 21:01	Booking System - Green Cargo	Trainnumber 19069	1,950 Euro	484Kg/182%
2	IB000010002	GOTEBORG	ZEEBRUGGE	Thu 21 Mar 2013 05:00	Fri 22 Mar 2013 18:00	Booking System - Cobelfret	COBEL	3,180 British Pound	868Kg/288%

© Copyright IntelliTrans 2013

- LSC / FSI can book with multiple carriers used in the routing at one time.
- LSPs and FSIs receive bookings and transmit confirmations easily.

Simplification of Tracking



The screenshot displays the iCargo software interface with several key sections:

- Alerts Overview:** A table showing alerts with columns for Alert, Date, Total, Att, Unatt, and % Unatt. Alerts include 'Arrival Baltimore' and 'Nucor Bad Bills'.
- Daily Shipment Exception Overview:** A table with columns for Consignee, LDC, I, T, TRP, No. Carrier, Equip. in Outstate, and SCD. Consignees listed include A.G. SMITH, ABU TRAILERS INC, ACIER LESOUX_A DIVIS, ACIER LESOUX_INC, AFCD STEEL, and AGS AUTOMOTIVE.
- Message Center:** A section with tabs for Data and Summary, currently showing 'No Messages to display'.
- Search Results:** A detailed view of search results for 3 items. It includes fields for Shipper, Destination, Consignee, Trip L/E, Origin, and Train ID. Below this is a table of equipment with columns for Equipment List, Status, Code, Current Location, Current State, Sighting, Destination, Current Carrier, Sighting Date, BOL/Flatcar ID, OETA, Fleet ETA, Waybill Create Date, Partner ID, and Actions. The results show equipment from Hunstagan NSP SE and KVARNSVEDEN.

- Transparency throughout the distribution chain.
- LSPs and TNMs provide status updates on shipments.
- Visibility for LSCs.
- Cargo known through booking process.
- Identification of on-schedule and off-schedule shipments.

Simplification of Tracking - Continued



Overview | Search | Reports | Pipeline | Billing | Analytics | Equipment | Admin | Tools | Daily Tasks | Pooling | Yard | Paper Order

Search

Select Access Group: All

* Indicates that wildcard characters (% and _) can be used

Search View Map View Equipment Map Reset Save As Search Template Download Use Search Template: Select Delete

Trip Status Code: Current Historical Cancelled Snapshot: Snapshot Trip Conditions: Jeopardized Hot

Use Result Template: VIN based Template (Standard) Edit Copy Create View

Customer: All Customer List

Equipment Search: All Equipment List

Vehicle Identification Number Search

Shipment Search Criteria

Mode: All	Equipment Type:	Trip L/E: All
Origin City: State: State:	Origin Carrier:	AP/CD: Select One
Destination City: State: State:	Current Carrier:	Fleets: All
Shipper: Consignee:	Current Location:	Days to Dest.: = Days
ETA: Comment: BOL: Shipment PO: Hrs in Jeopardy >=:	Status Code: Waybill Number: Train ID: Weight: Min Max: Cust. Order No.:	Days Not Moved: = Days
Jeop. Category: Select		Ship Date: From To
		AP Date: From To
		CP Date: From To
		Rls/E Date: From To
		Rls/L Date: From To

GPS Telematics

Temperature: From To Direction: Speed: From To

Custom Search Fields 4

Q. Origin City: In Q. Destination City: Destination State: Not In

Custom Search Fields 5

Partner ID: = Product Type: = STCC: =

Custom Search Fields 6

Product: Libo Trip Conditions: Libo Waybill Source: =

Custom Search Fields 7

Comment Code: = Train ID: = Route ID: =

Custom Search Fields 8

Trip Information: = Comment: Is Null Route: =

Custom Search Fields 9

GPS Sighting Date: <= Fleet: In Delivery Number: =

Search View Map View Equipment Map Reset Save As Search Template

- Search by any parameter:
 - Shipment.
 - Status.
 - Calculated values.
- Configurable by customer.
- Look-ups for valid parameter values.
- Current leg and prior legs.
- Templates for repetitive use.

Simplification of Payment - Pricing



Overview | Search | Reports | Pipeline | Billing | Analytics | Equipment | Admin | Tools

Search Billing Authorities

Search Billing Authorities

Authority Type: All Mode: -Select-
 Authority Title: Carrier: Effective Dates: 10/1/2013 to Display Retired: No

Search Reset Create New Authority

Displaying Records 1 - 17 of 17.

C/T	Authority Title	Mode	Carrier	Start Date	End Date	Actions
C	BNSF 90076 Item 2011	R	BNSF	10/01/2013	09/30/2014	Update Copy Retire
T	BNSF900076 Item1034	R	BNSF	10/01/2013	09/30/2014	Update Copy Retire
T	BNSF90076 item1019	R	BNSF	10/01/2013	09/30/2014	Update Copy Retire
T	BNSF90076 item1000	R	BNSF	10/01/2013	09/30/2014	Update Copy Retire
T	BNSF90076 item1					
T	BNSF90076 item2					
T	BNSF90076 item3					
T	BNSF90076 item8					
T	BNSF90076 item2					
T	BNSF90076 item2070 (1					
T	BNSF90076 Item1					
T	BNSF 90076 Item.					
T	BNSF80002 item1					
T	BNSF90076 item5					

Overview | Search | Reports | Pipeline | Billing | Analytics | Equipment | Admin | Tools

Search Billing Rates

Search Billing Rates

Authority Type: All Mode: -Select-
 Authority Title: BNSF90076 item1019 Carrier: BNSF
 Authority Item: Equipment Type: -Select-
 Commodity: Origin City: State Country
 Effective Dates: From To Destination City: State Country
 Ownership: All Unit Train Length: Min Max
 Rate Type: --Select-- Publication No.:
 Rule 11 Applicable: All Display Retired: No

Search Clear Cancel

C/T	Authority Title	Item	Carrier	Rate Type	Rate	UOM	Start Date	End Date	Commodity	Equipment Type	Length	R-11	Owner	Mode	Actions
T	BNSF90076 item1019		BNSF	Flat	\$6218	Car	10/01/2012	09/30/2013				No	Private	R	Copy View
	Origin: ;HOUSTON,TX		Destination: ;BERTHOLD,ND		Route: BNSF/;										
T	BNSF90076 item1019		BNSF	Flat	\$6430	Car	10/01/2012	09/30/2013				No	Rail	R	Copy View
	Origin: ;MILL CREEK,OK		Destination: ;WILLISTON,ND		Route: BNSF/;										
T	BNSF90076 item1019		BNSF	Flat	\$6033	Car	10/01/2012	09/30/2013				No	Private	R	Copy View
	Origin: ;MILL CREEK,OK		Destination: ;WILLISTON,ND		Route: BNSF/;										
T	BNSF90076 item1019		BNSF	Flat	\$4002	Car	10/01/2012	09/30/2013				No	Rail	R	Copy View
	Origin: ;MILL CREEK,OK		Destination: ;DENVER,CO		Route: BNSF/;										
T	BNSF90076		BNSF	Flat	\$3575	Car	10/01/2012	09/30/2013				No	Private	R	Copy View

Create New Authority

- “List” price publication.
- “Contract” price availability.
- Flexible rate types.
- All-in or by carrier / leg rates.
- Effective periods.
- Multiple bunker / fuel surcharges.
- Transparency is key.

Simplification of Payment - Auditing



Overview Search Reports Pipeline Billing Analytics Equipment Admin Tools

Invoice Management

Display Results: OPEN RESOLVED

Carrier:

Invoice Number:

BOL Number:

Equipment ID:

Commodity:

Ship Date: To:

Matching Status:

Origin City: State:

410 Status:

Destination City: State:

824 Status:

Search Clear Cancel

Displaying Records 1 - 20 of 133.

INVOICE INFORMATION				TRIP INFORMATION				STATUS					
Carrier	Invoice No	Waybill Date	Amount	Equipment	Carrier	BOL	Ship Date	Amount	Equipment	410 Due	Matching	410	824
CPRS	609193047	10/24/2012	39.										
CPRS	609193049	10/24/2012	39.										
CPRS	609193050	10/24/2012	39.										
CPRS	609193051	10/24/2012	39.										
CPRS	609193052	10/24/2012	39.										
BNSF	193671798	01/06/2013	15.										
UP	259663247	01/28/2013	306.										
UP	259663247	01/28/2013											
UP	259663247	01/28/2013											
UP	260292719	03/14/2013	38.										
UP	261028553	04/24/2013	14.										
UP	261041440	02/26/2013	13.										
UP	261335286	05/16/2013	55.										
CSXT	46706443	05/22/2013											

Overview Search Reports Pipeline Billing Analytics Equipment Admin Tools

Invoice Review

Invoice Number: 609193047 Matching Status: UNDER REVIEW Matching Status Date: 05/06/2013

Invoice Bill Date: 10/26/2012 Invoice Status: DISPUTED 410 Status Date:

Invoice Due Date: 824 Status: 824 Status Date:

Invoice/Trip Information

Field	Invoice Information	Trip Information
BOL Number	REBILLUNDERWOOD	REBILLUNDERWOOD
BOL Ship Date	10/24/2012	10/24/2012
Origin	UNDERWOOD, ND	UNDERWOOD, ND
Destination		BERTHOLD, ND
Total Weight		223652
STCC	1441321	1441321
Carrier	CPRS	CPRS
Lead Equipment ID	DSIX005817	DSIX005817
Route		CPRS-MINOT-BNSF

Approve Without BOL Rule 11 Invoice : NO [View Invoice Parties](#)

Charge Information

Invoice Amount	BOL Amount	Comment
Line Haul Charge \$ 3880.00	\$ 3880.00	LINEHAUL CHARGE
Fuel Surcharge \$ 65.88	\$ 56.76	FUELSURCHARGE
Accessorial Charge		
Grand Totals: \$ 3945.88	\$ 3936.76	View Invoice Pricing Authorities
Override Amount \$ 3945.88		
Invoice Override \$ <input type="text"/>	<i>(Comment is required if Invoiced Amount is overridden)</i>	

- Electronic invoice receipt from carriers, or self-invoicing.
- Manual entry of invoices.
- Matching logic – shipments to invoices.
- Tolerance management.
- Resolution update.
- Trigger actual payment.

- Lower transportation cost per tonne kilometer.
 - Lower cost modes are often avoided due to process complexity and longer and more variable transit times.
 - iCargo addresses these concerns:
 - One-step booking simplifies execution.
 - Tracking and pro-active alerting eliminates “black holes”.
 - Support services mitigate transport variability.
 - Analytics allow for realistic calculation of impact of variability.
 - Typically results in lower total line-haul costs.
- Lower bunker (fuel) surcharges.
 - Ability to use modes that consume less fuel per tonne-kilometer.
- Lower carbon emissions:
 - Easily identify potential savings up-front.
 - Calculate actual emissions after completion.

Quantitative Benefits of iCargo



- Increased revenue for LSPs / TNMs.
 - Awarded business that otherwise would have gone to road.
 - Greater use of multi-modal within many industry segments.
- Improved payment cycles.
 - Integrated invoicing, auditing, and payment allows for more consistent payment processing.
- Increased capacity utilization.
 - Automated re-booking solution upon schedule changes enables LSPs to sell open capacity created.
 - Reduces “empty” hauls – containers & power.
- Reduced technology costs.
 - iCargo ecosystem makes it much easier to collaborate with numerous trading partners.
 - “Virtual FSIs” will become more prevalent, allowing LSCs to enjoy the cost reduction enabled through SaaS solutions & ecosystem development.

Qualitative Benefits of iCargo



- Process automation and simplification.
 - Reduce workload for booking shipments.
 - This is true for all parties – LSCs, LSPs, FSIs.
- Improved pro-active customer service.
 - Provide transparency throughout the supply chain, including to the LSC's customers.
 - Either direct access to iCargo solution, or provided with alerts & notifications.
- Improved responsiveness to demand and transport changes.
 - Ability to know about changes across the distribution chain allows for re-deployment of inventory more efficiently.
 - Calculate required inventory based on actual data, not heuristics or tribal knowledge.
 - Divert product to meet customer promises more easily.
- Ability to utilize more LSPs / FSIs, if desired.
 - Increased ability to manage capacity when transportation supply is tight.

- Improved data quality and completeness.
 - Because of the need for greater visibility and predictability, you end up with much more complete data.
 - Due to shorter, more consistent transit times, over-the-road shipments often have much lower POD completeness.
 - Improves overall analytics, including carrier scorecards and customer service dashboards.
- Improved ability to manage exceptions.
 - Ease of obtaining status updates makes it much easier to find shipments off-plan and address that with the carriers.
- Improved documentation management.
 - Ability to retrieve required booking, customs, etc. documents.
- Flexible business models.
 - Open network – share standard pricing and schedules to be discoverable by all.
 - Closed network – collaborate with only your contracted trading partners, but leverage the other advantages that iCargo brings.

- Open platform for many users – (Platform ownership and investors)
 - Publicize the platform existence for transport lanes – destinations
 - LSP selection as a member/ partner of the platform
 - LSP request to join ‘open partnerships’
 - What services will or should the platform provide - invoicing, through booking?
- Published rate options
 - General usage
 - For specific or individual LSC – negotiated rates with a supplier
- Closed platform used by partnership created by LSP -platform owned by LSP’s
 - One to one LSP relationships
 - One to many LSP relationships
- Closed platform with partnership creation for LSC- platform owned by LSC
 - Contractual relationships and agreements
- Functionality of the platform
 - Information only
 - Booking from source to destination – with a number of carriers
 - Used to book freight movements - LSPs to confirm LSCs bookings requirements
 - Single freight invoice for a LSC

- Decentralized infrastructure, cloud-based.
- Access Points are used to publish and subscribe.
- Open system with ease of connectivity to other systems.
- Co-exist with LSP / FSI / LSC existing systems.
- Solutions available to leverage iCargo ecosystem today.
- Ability to use older integration methods and manual updates.

- The iCargo ecosystem and associated solutions can deliver significant benefits to all members of the logistics chain:
 - Reduced transportation cost – line haul & fuel.
 - Reduced carbon footprint.
 - Increased revenue & capacity utilization.
 - Increased transparency & improved pro-active customer service.
 - Automated business processes & reduced labor.
 - Reduced technology costs.
- Realization of 5-10% in cost savings through efficiency, not price.
- The iCargo ecosystem is flexible and open, allowing for participation at lower costs.
- Solutions exist in the ecosystem that provide integrated, end-to-end booking, visibility, and payment solutions.

Intelligent Transport Systems - iCargo

The Commercial Benefits of iCargo

Simplifying Multi-Modal Transport by Breaking Down Barriers