

Baltic.AirCargo.Net

TransBaltic Meeting
Helsinki, 27.01.2012

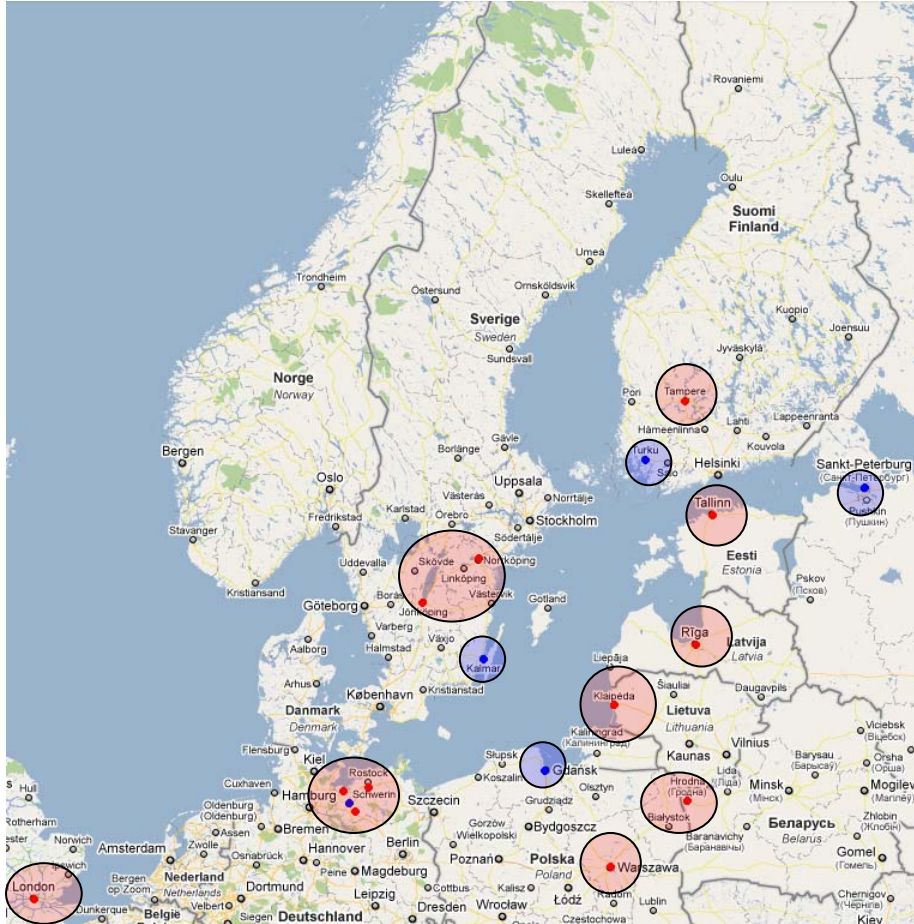
Presented by:
Gunnar Prause

Date:

BSR INTERREG IVB Project

- Lead Partner – Wismar University
- Project approval: 10.06.2010
- Project duration: 11.09.2010 – 10.09.2013
- Project total budget: 3,073 Mio EUR
- 14 Partners from 8 programme area countries + 1 from UK

Project partnership



Germany:

- Wismar University of Applied Sciences
- HCN Management e.V.
- City of Laage, Airport Rostock-Laage
- Parchim County, repr. Parchim International Airport
- Ministry of Transport Mecklenburg Vorpommern

Latvia:

- Latvian Transport Development and Education Association (LaTDEA)
- Daugavpils Airport

Poland:

- Institute of Aviation, Warsaw
- State Association of the Polish Airport

Estonia:

- Tallinn University of Technology
- Estonian Air

Sweden:

- Etablering Norrköping AB / Transportcentrum
- Linköping university, Linköping School of Management, Logistics Management
- City of Kalmar (Kalmar Airport)

Finland:

- Tampere Chamber of Commerce & Industry,
- Pilot Turku

Lithuania:

- Klaipėda Science and Technology Park
- Palanga Airport

Belarus:

- Yanka Kupala State University of Grodno
- State-owned Enterprise BelAeroNavigation, Airport Grodno

UK

Innovative Compliance Europe Ltd

Russia:

- North-Western Russia Logistics Development Centre „ILOT“– St. Petersburg

Some Facts about Air Cargo

- IATA figures von 2010
 - Air cargo only represents 2 % of international trade in tons
 - But 35 % in terms of value
 - Global TO in air cargo business: 60 bio. US\$
 - Average air cargo growth rates: 6 % expected
- Wide-body aircarft can carry 15-20 tons of cargo
 - Main air cargo products
 - » Consumer electronics, spare parts for plants/cars
 - » Food, seafood, fruits, flowers
- European air cargo centers:
 - Frankfurt: 2,2 Mio. t
 - Paris: 2,2 Mio. t
 - Amsterdam: 1,5 Mio. t
 - Heathrow : 1,5 Mio. t
 - Copenhagen: 0,3 Mio. t

Airports Council International's Top 50 Airports

ACI Rank	CITY	Cargo 2010 tonnage	YOY%	ACI Rank	CITY	Cargo 2010 tonnage	YOY%
1	HONG KONG (HKG)	4 168 394	23.2	26	OSAKA (KIX)	759 278	24.7
2	MEMPHIS (MEM)	3 916 937	5.9	27	LUXEMBOURG (LUX)	705 370	12.2
3	SHANGHAI (PVG)	3 227 914	27.1	28	KUALA LUMPUR (KUL)	697 015	15.6
4	INCHEON (ICN)	2 684 500	16.1	29	MUMBAI (BOM)	671 238	18.5
5	ANCHORAGE (ANC)	2 578 396	33.1	30	ATLANTA (ATL)	659 129	17
6	PARIS (CDG)	2 399 067	16.8	31	DALLAS/FORT WORTH (DFW)	650 584	10.9
7	FRANKFURT (FRA)	2 275 106	20.5	32	COLOGNE (CGN)	644 029	16.6
8	DUBAI (DXB)	2 270 498	17.8	33	LIEGE (LGG)	639 669	32.7
9	TOKYO (NRT)	2 167 843	17.1	34	LEIPZIG (LEJ)	638 491	25.9
10	LOUISVILLE (SDF)	2 166 226	11.1	35	NEW DELHI (DEL)	594 496	25.6
11	SINGAPORE (SIN)	1 841 004	10.9	36	BOGOTA (BOG)	526 844	17
12	MIAMI (MIA)	1 835 793	17.9	37	OAKLAND (OAK)	510 823	2.8
13	LOS ANGELES (LAX)	1 810 345	15.5	38	JAKARTA (CGK)	501 803	12.7
14	TAIPEI (TPE)	1 767 075	30.1	39	SHANGHAI (SHA)	480 438	9.5
15	LONDON (LHR)	1 551 405	15.0	40	TORONTO (YYZ)	471 337	9.1
16	BEIJING (PEK)	1 549 126	5	41	ISTANBUL (IST)	466 553	22.4
17	AMSTERDAM (AMS)	1 538 135	16.8	42	ABU DHABI (AUH)	442 326	15.6
18	CHICAGO (ORD)	1 424 077	30	43	BRUSSELS (BRU)	441 442	7.2
19	NEW YORK CITY (JFK)	1 343 114	17.4	44	MILAN (MXP)	432 672	25.8
20	BANGKOK (BKK)	1 310 146	25.3	45	SAN FRANCISCO CA (SFO)	432 235	5.9
21	GUANGZHOU (CAN)	1 144 458	19.8	46	CHENGDU (CTU)	432 153	14.6
22	INDIANAPOLIS (IND)	947 279	5.2	47	SAO PAULO (GRU)	430 850	12.6
23	NEWARK (EWR)	854 750	9.6	48	HOUSTON (IAH)	426 875	14
24	SHENZHEN (SZX)	809 363	33.6	49	MANILA (MNL)	423 853	17.4
25	TOKYO (HND)	804 995	1.9	50	PHILADELPHIA (PHL)	419 659	(3.2)

Total Cargo: loaded and unloaded freight and mail in metric tonnes.
*ANC data includes transit freight.

Source: Airports Council International

No BSR
Airport among
Top 50

CPH is #16
inside EU

EU Air Cargo Airports

2009

Rank	Country	Airport	Total air transport (in tonnes)	Freight and mail loaded	Freight and mail unloaded	Growth of total freight transport 2008-2009	Total number of freight flights (in 1000)	Growth of total number of freight flights 2008-2009
1	DE	FRANKFURT/MAIN	1 882 662	933 781	948 881	-10.5%	21	-4.7%
2	UK	LONDON/HEATHROW	1 348 914	717 066	631 848	-9.0%	3	-2.8%
3	NL	AMSTERDAM/SCHIPHOL	1 316 848	703 180	613 668	-17.3%	13	-9.1%
4	FR	PARIS/CHARLES DE GAULLE*	1 202 300	584 795	617 505	-13.6%	44	-6.0%
5	LU	LUXEMBOURG	627 261	288 286	338 975	-20.4%	10	-11.2%
6	DE	KOLN/BONN	549 025	258 675	290 350	-4.4%	22	-6.3%
7	DE	LEIPZIG/HALLE	508 793	255 983	252 830	18.3%	28	2.0%
8	BE	LIEGE/BIERSET	401 799	203 903	197 896	5.3%	23	-4.5%
9	BE	BRUXELLES/NATIONAL	384 428	172 391	192 035	-40.7%	11	-10.1%
10	IT	MILANO/MALPENSA	343 561	168 901	176 660	-17.0%	6	-13.3%
11	ES	MADRID/BARAJAS	330 161	166 515	163 646	-7.0%	9	-7.1%
12	UK	NOTTINGHAM EAST MIDLANDS	286 629	140 989	145 639	-2.0%	18	-13.2%
13	DE	MUNCHEN	234 340	109 395	124 945	-11.5%	4	-7.8%
14	UK	LONDON STANSTED	213 384	123 411	89 972	-7.2%	10	-12.0%
15	AT	WIEN/SCHWECHAT	198 327	126 731	71 596	-1.5%	4	-8.7%
16	DK	KOBENHAVN/KASTRUP	152 012	77 227	74 785	-38.4%	6	-11.7%
17	IT	ROMA/FIUMICINO	139 014	65 679	73 335	-9.1%	4	-5.7%
18	FI	HELSINKI/VANTAA	121 849	61 071	60 778	-13.9%	5	-6.4%
19	DE	FRANKFURT/HAHN	105 059	54 865	50 195	-14.0%	4	-3.3%
20	UK	MANCHESTER	103 006	60 415	42 591	-27.8%	2	-15.2%

* Due to freight and mail data collection difficulties, the data for Paris-Charles de Gaulle are underestimated.

EU Air Cargo by countries

		Total transport		National transport		International intra-EU-27 transport		International extra-EU-27 transport	
		Volume of freight and mail	Growth 2008-2009	Volume of freight and mail	Growth 2008-2009	Volume of freight and mail	Growth 2008-2009	Volume of freight and mail	Growth 2008-2009
EU-27 ⁽¹⁾		11 315 885	-12.3%	595 652	-8.9%	1 833 997	-5.5%	8 886 236	-13.9%
BELGIUM	BE	836 409	-21.9%	784	31.8%	255 250	-19.5%	580 375	-23.0%
BULGARIA	BG	17 450	-10.7%	28	-17.1%	12 194	-20.8%	5 230	27.3%
CZECH REPUBLIC	CZ	53 924	-3.5%	1 486	-21.5%	25 792	-15.7%	28 646	13.8%
DENMARK	DK	155 438	-38.8%	2 136	-17.9%	65 886	-41.6%	87 416	-37.0%
GERMANY	DE	3 341 222	-6.4%	109 679	-15.4%	798 918	-0.8%	2 432 625	-7.7%
ESTONIA	EE	20 526	-50.8%	-	-	4 587	-35.4%	15 939	-54.0%
IRELAND	IE	112 049	-11.7%	6 105	-21.2%	71 542	-3.2%	34 402	-23.9%
GREECE	EL	95 222	-12.3%	12 113	-14.5%	52 672	-11.5%	30 537	-12.9%
SPAIN	ES	502 585	-6.9%	84 543	-16.7%	151 378	-8.0%	266 664	-2.6%
FRANCE ⁽²⁾	FR	1 445 599	-13.3%	148 037	1.7%	260 152	-12.0%	1 037 410	-15.5%
ITALY	IT	705 883	-13.4%	80 825	-10.9%	253 168	-8.1%	391 892	-17.9%
CYPRUS	CY	38 636	-9.7%	1	-	30 465	-10.6%	8 169	-6.3%
LATVIA	LV	8 646	25.6%	-	-	5 917	24.2%	2 729	28.8%
LITHUANIA	LT	6 465	-28.6%	-	-	5 467	-15.9%	998	-60.8%
LUXEMBOURG	LU	627 261	-20.4%	-	-	43 608	-4.6%	583 653	-21.4%
HUNGARY	HU	54 138	-13.4%	-	-	24 596	-5.4%	29 542	-19.2%
MALTA	MT	17 496	-4.0%	-	-	11 531	-9.9%	5 965	9.9%
NETHERLANDS ⁽³⁾	NL	1 371 235	-16.8%	0.4	2130.0%	48 418	-20.2%	1 322 817	-16.7%
AUSTRIA	AT	202 642	-1.7%	807	-9.0%	49 081	-8.7%	152 774	0.0%
POLAND	PL	53 510	-8.0%	7 874	0.5%	28 779	-4.0%	16 866	-17.1%
PORTUGAL	PT	125 498	-8.0%	21 624	-2.2%	54 406	-10.7%	49 468	-7.2%
ROMANIA	RO	23 482	-3.9%	251	-16.1%	19 197	3.5%	4 034	-27.8%
SLOVENIA	SI	5 584	-31.7%	-	-	3 825	-35.0%	1 759	-23.4%
SLOVAKIA	SK	12 231	64.6%	2	100.0%	11 689	72.9%	540	-19.5%
FINLAND	FI	126 900	-14.2%	3 691	2.5%	50 990	-12.7%	72 219	-15.8%
SWEDEN	SE	161 310	-21.8%	17 972	-17.8%	76 421	-22.7%	66 917	-21.8%
UNITED KINGDOM	UK	2 156 153	-10.6%	117 695	-6.1%	379 798	-7.6%	1 658 660	-11.5%

⁽¹⁾ Double counting is excluded in the intra-EU-27 and total EU-27 aggregates by taking into consideration only departure declarations.

⁽²⁾ Due to freight and mail data collection difficulties, the data for the two main airports in Paris (Charles de Gaulle and Orly) are underestimated. This also affects the aggregated freight data for France.

⁽³⁾ The high growth observed at national level should be considered with care, as it represents a very small volume of freight and mail in absolute terms.

EU Air Cargo

- 12.3 million tons of air freight (both national and international) carried 2009 through airports in EU-27
 - ca. 0.1% of EU cargo market
- German Airports dealt with 3.3 million tons of air freight, considerably more than in any other EU State
- United Kingdom had the second highest amount of air freight at 2.2 million tons.
- Some of the smaller Member States are relatively specialised in air freight, notably all Benelux countries, in particular, Luxembourg (#7 in EU Ranking).

EU Air Cargo Structure

- Air cargo flights mainly long haul flights to Asia and America
- Inside-BSR air cargo transportation modes
 - Flighing trucks (feeder service, May 2010)



Structure of EU Air Cargo

- EU Cargo Market 2010

• Air cargo:	13,398,000 tons	=	0.08%
• Sea Cargo:	2,909,626,000 tons	=	16.34%
• Rail Cargo:	1,463,680,000 tons	=	8.22%
• Road Cargo:	13,423,006,000 tons	=	75.37%

- EU Air Cargo Transport volumes

• Volumes of EU national transports:	5 %	
• Volumes of intra-EU transports:		16%
• Volumes of extra-EU transports:	79 %	

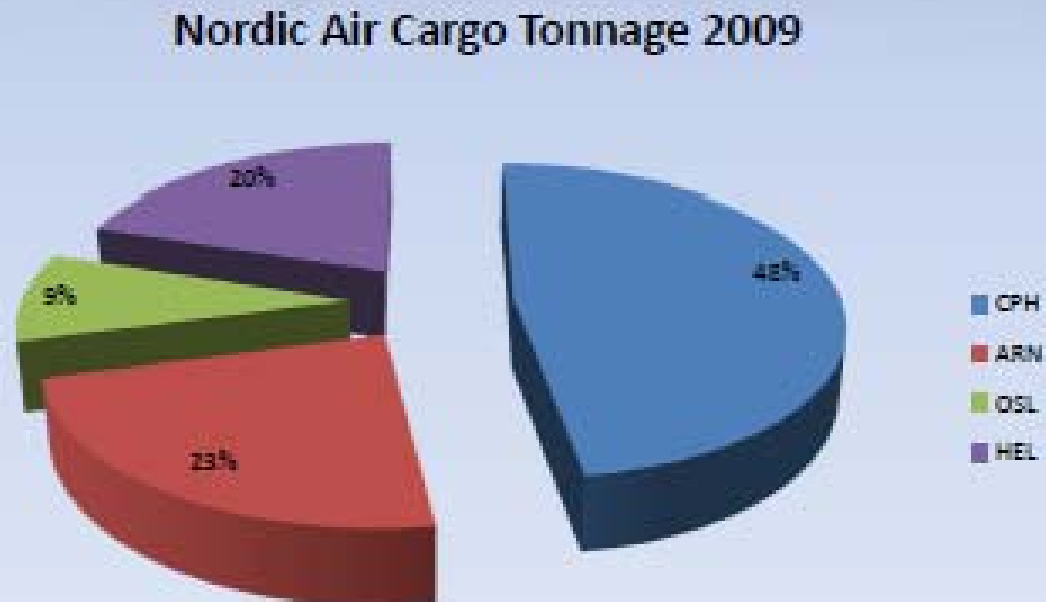
BSR Air Cargo

- BSR represents only about 5% of EU Air Cargo Market
- The two biggest EU BSR countries Germany and Poland are characteristic for BSR Air Cargo Market
 - Poland: BSR Airports represent ca. 6 % of PL volume
 - » Gdank, Szczecin
 - Germany BSR Airports represent ca. 4 % of DE volume
 - » Hamburg, Berlin, Bremen
- Most important BSR Air Cargo hub is Copenhagen Airport

Nordic Air Cargo

- Biggest Nordic player is Copenhagen Airport (CPH)

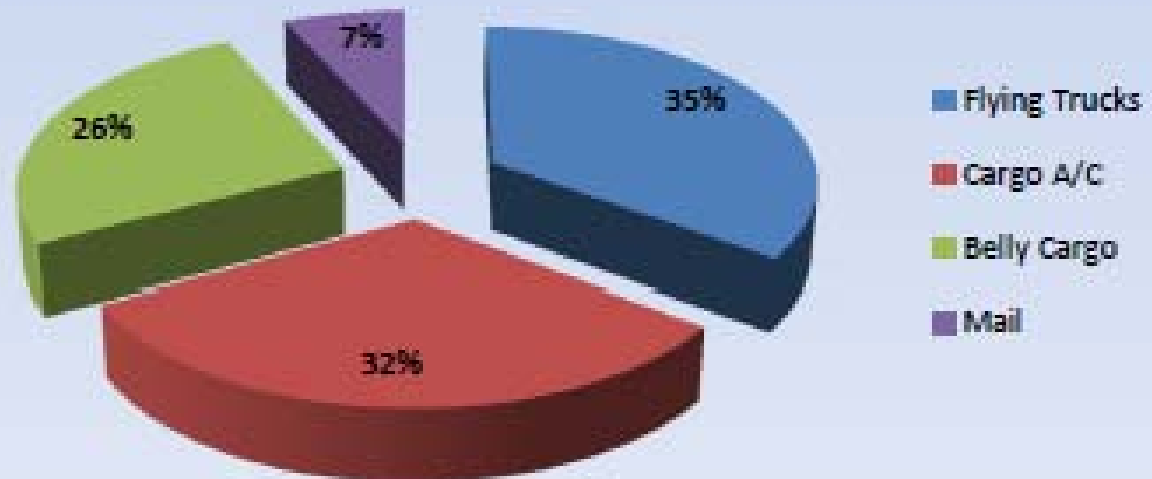
Nordic Air Cargo Tonnage 2009



Air Cargo in CPH

Air Cargo at Copenhagen Airports 2008

Air cargo, CPH, 2008







Air Cargo in CPH

Air Cargo, Copenhagen Airports, commodity groups, 2008

Air Weight, metric tons (Kg x 1000)

	2008 Export	Import
Capital Equipment & Machinery	4.709	1.607
Chemicals & Products	1.514	696
Consumer Fashion Goods	156	11.750
Consumer personal & household goods	1.505	3.803
High Technology	1.537	4.770
Land Vehicles & parts	823	1.097
Live Animals	23	49
Machinery parts, Components, supplies & manufactures n.e.s.	8.353	5.746
Raw Materials, Industrial consumables & Foods	5.797	3.121
Secure or Special Handling	280	694
Temperature or Climate Control	2.293	759
Waste Products	0	0
All commodity groups	27.010	34.092

General BSR Air Cargo Situation 1

Structural challenges

- Regional airports act isolated
 - Consolidated networking activities are missing
 - Lack of interregional co-operation between regional authorities & airports
- “Flying Truck” are underdeveloped, mostly unknown and unused
- Role of regional airports in the common infrastructure is not identified
- Further question marks:
 - international air cargo market and its future perspectives?
 - security regulations and requirements?
 - which elements of the cargo shall be combined for optimal operation?
 - what infrastructure is needed for optimal mix of road-rail-air-sea transport?

General BSR Air Cargo Situation 2

Informational / ICT challenges

- Fragmented information traffic of the air-cargo flow
- Various closed user groups do not allow a complete air cargo overview (retain of information to assure the position on the market)
- Regional airports are not involved in already existing air cargo information systems

Structural

- Link regional airports by “flying trucks” air cargo hubs in EU
- Optimizing transport connections between regional airports
- Improving the logistic air cargo services in the participating partner regions
- Pinpoint areas of concern of regional airports and their positioning in a common air cargo market

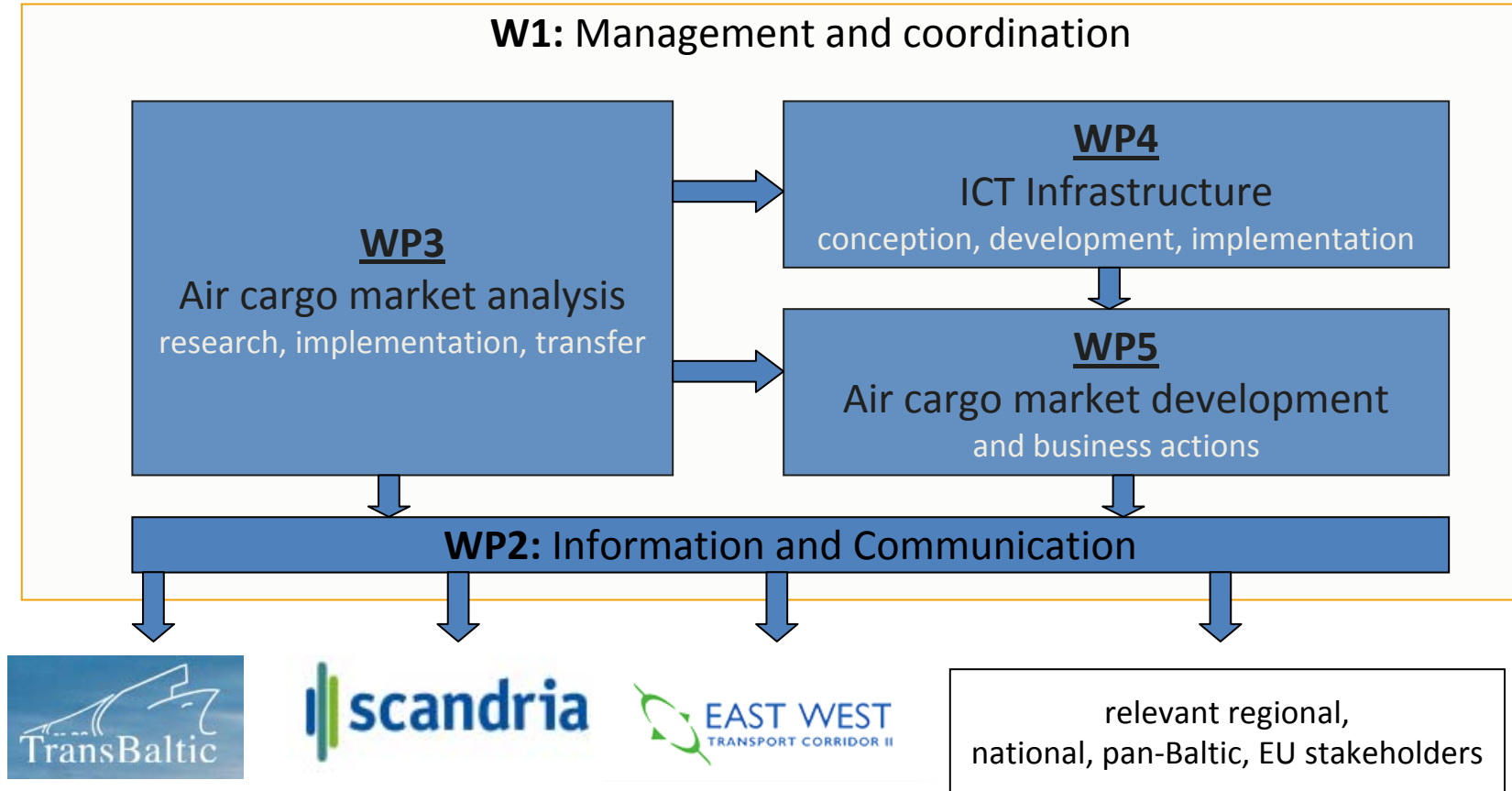
Informational

- Increasing capacity of regional airports by improving usability, functionality and accessibility of the ICT network in the air-cargo sector.

Political

- Enhancing collaboration among regional airports and airfreight players
- Securing relevance of the project activities with transport development strategies of single regions and whole Baltic Sea Region

HOW? – Project structure



Air cargo market analysis:

- stakeholders of the air cargo sector in a region?
- existing hub and spoke system in participating regions?
- current role of a single airport in the global network of air cargo supply chains?

ICT infrastructure analysis

- Analysis of air cargo related ICT infrastructure,
- description of general standards,
- applicable ICT technologies and methods

“Flying trucks” Concept

- main flows (routes and annual volumes, frequencies) of the air cargo of the BSR (described per segment: carried by freighters, courier/express planes, flying trucks)?

Air cargo security regulations

- Implementation of the EU standards for certification, acceptance as equal members of airport industry across the EU

ICT “To-Be” Concept

- system concept, definition of interfaces & integral realization concept for the pilot Baltic air cargo information system stakeholders of the air cargo sector in a region

Air Cargo ICT infrastructure (pilot) devolvment

- providing the extern systems with the interfaces to the air cargo information system
- implement the internal interfaces, incl. interaction of the partial modules with functionality, stability check
- pilot on-road test of the system, i.e. system test on the interfaces & connections, compilation of information on incoming air freight, etc.

ICT Transfer

- organization of training seminars for relevant users in each partner region
- creation of transfer Concept for the Air Cargo Information System
- securing transferability and cooperation with other systems

WP5 : Air cargo market development

Market development and pilot actions

- involving regional business sector
- preparation of operational requirements for a modal shift
- implementation of “flying truck” concept
- framework development for air cargo related facilities, distribution centers

Network establishment

- Air Cargo Networks Assessment
- Inter-regional air-cargo network strategy, i.e. co-operative strategy

Inter-Regional Marketing and Air Cargo Service Development Initiatives

- Interaction with relevant networks on EU & international level
- Existing links will be analyzed and explored via existing contacts (Baltic China Science Park Network Kalmar, Parchim airport, TransLaB LaTAIA, etc.

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