

Dzień informacyjny „Inteligentny, zielony i zintegrowany transport” - Lotnictwo

Warszawa 2015



„GEIMSeaTS - Green Ground Effect Inter-Modal Sea Transport Study”

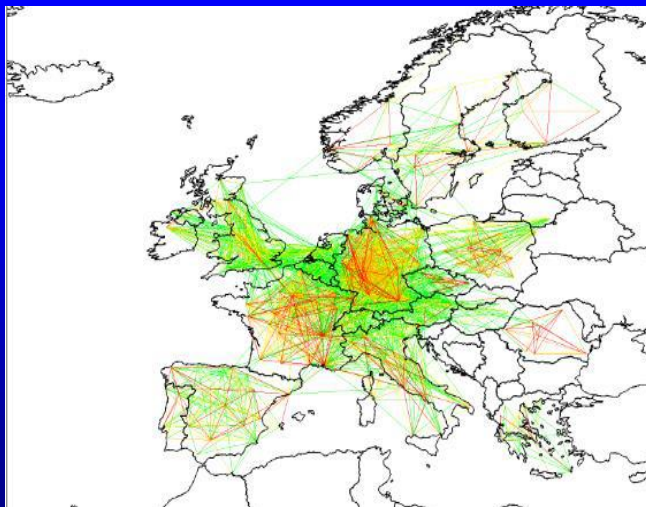


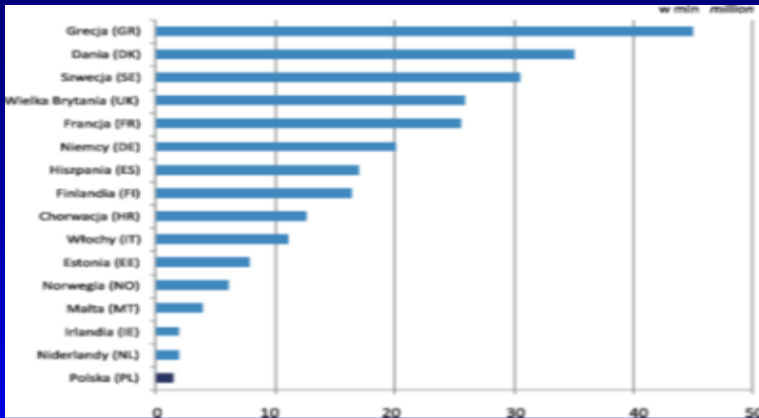
Zbigniew PAŁGOWSKI Ph D
Institut Lotnictwa - Institute of Aviation
Warsaw, *Poland*



1270 airports and
1300 landing
fields

43 hubs = 85% traffic





HOVERWING

Der Vorteil

Die Ostsee heute:
Fährgeschwindigkeit

Die Ostsee morgen:
180 km/h mit Hoverwing

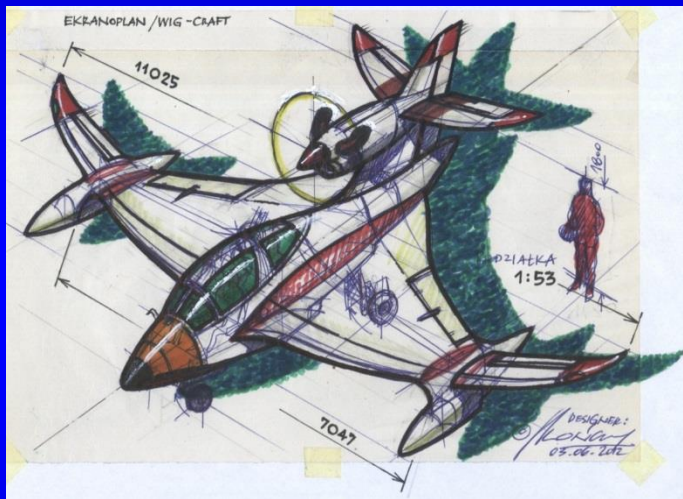
1 Tagesreise

Präsentation HOVERWING Transport-Technologie

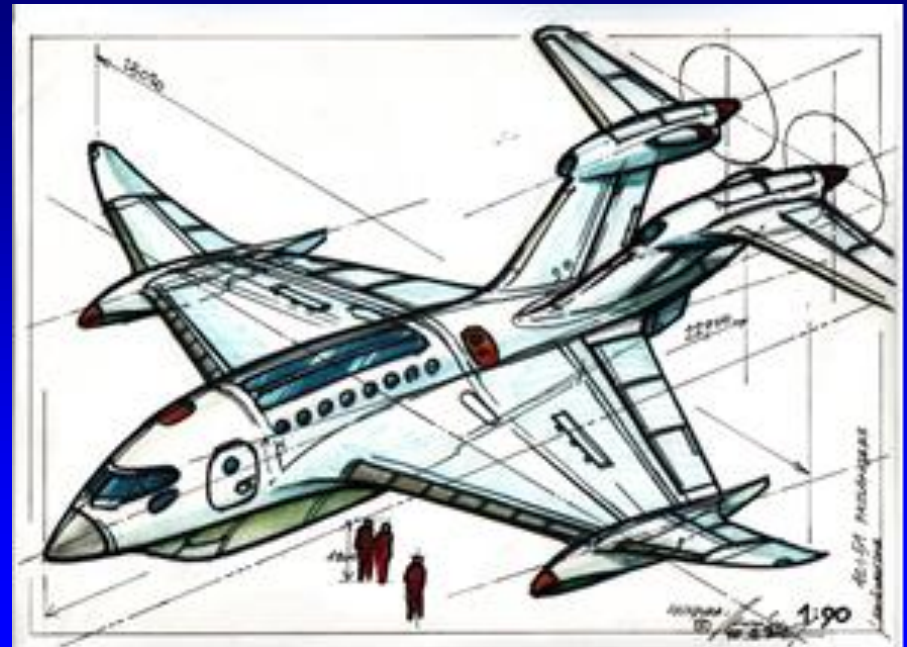
Comparison of transport mode on Baltic Sea (above)			
Type of transport	Car	Ship	Ekranoplane
Time (h.min)	5 .30	2.45	.57
Cost (Euro)	103	36	21

Passenger movements in Europe (Poland is on last position)





Passengers capacity:	5 people (1 crew member)
Overall Length:	22.9 m
Width:	11,03 m
Height:	3,5 m



Passengers capacity:	50 people (2+1 crew member)
Overall Length:	22.9 m
Width:	23,25 m
Height:	3,5 m



Participant no.	Participant Organisation Name	Participant org. short name
1 (co-ordinator)	B4 ?	B4
2	Institute of Aviation (Instytut Lotnictwa - PL)	ILOT
3	Ad Cuenta	AdC
4	Gdynia Maritime University	GMU
5	Fischer Flugmechanik	FF
6	CRN Management GmbH	CRN
7	Worms University of Applied Sciences	WUAS
8	Aero Concept Engineering	ACE
9	LEITAT TC	LEITAT
10	Air Force Institute of Technology	ITWL
11	AIMEN TC	AIMEN
12	Ateknea Europe Solutions	AES
13	Paragon Europe	PARE
14	Kanardia s.l.	KANAR
15	Sheffield Hallam University	SHU
16	National Aviation University - Ukraine	NAU
17	Italian Aerospace Research Center	CIRA
18	National Institute of Aerospace Research – Romania	INCAS
19	Ivchenko-Progress	IVPROG



WP1. Analyzing gaps and problems limiting GEIMSeaTS

- overview of current R&D efforts conducted
- potential demand for GEIMSeaTS and its costs
- confirmed specifications and performance of currently produced “Ground effect” aircraft and amphibian aircraft
- To define a number of promising configurations

WP2. Mobility potential of market

- identification of actual and future needs including GEIMSeaTS
- general characteristics and hierarchy list of seaports for intermodal transport
- general requirements for “Ground effect” sea airports
- passengers mobility in area of European seas (Baltic, North Sea, Mediterranean, Adriatic Sea, Black Sea)

WP3 Concepts and Vision

- definition of a set of requirements for aircraft sizes
- identification of ATM system
- identification of environmental and safety needs
- initial effectiveness analysis
- integration of transport mission

WP4 New technologies specification

- numerical simulation and identification of new aerodynamics needs (optimise a high lift system to take-off and landing)
- stability and control for manoeuvring – cockpit systems
- hybrid propulsion systems and future fuels
- identification of new type of materials for “Ground effect”aircrafts
- synthetic vision of technologies

WP5 Enhanced scenarios and recommendations

- enhanced vision of scenarios and proposals
- GEIMSeaTS roadmap
- workshops
- dissemination

WP6 Management



waiting for coordinator



*thank you
for your attention!*



The source of images to be obtained from author of this PP

pagowski@ilot.edu.pl