EqIMG in Aviation Valley

Rzeszów , 22-23.10.2008, Poland

Robert Haligowski – WSK PZL-Rzeszów

Polish Aerospace Technology Platform

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Two ways of innovative industry sector integration

Industry sector

AVIATION VALLEY

Industrial cluster

Regional level

PATP

Technology Platform

National level

Polish Aerospace Technology Platform

- Definition of the **strategy for Polish aviation**
- Active participation in establishing Polish and implementation of European SRA
- Active participation in **EU Frame Programs**
- Preparation of ambitious strategic national research program meeting the needs of the sector, which could become a part of **National SRA**
- Cooperation with other branch platforms
- **Integration** of key **industrial and science partners**
- **Consolidation of** Polish aviation **sector**
- Mobilization of significant private and public resources
- Efficient use of structural funds (NPR 2004-2006, NPR 2007-2013), in order to **increase economy competitiveness**,
- **Promotion and lobbing** of aviation development

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Research capabilities

Polish aerospace industry transformation

PATP - Vision

- PATP has capability and ambition to become modern and reliable group driving R&D.
- PATP as an interface with European aerospace platform ACARE
- PATP stakeholders:
  - can offer a significant potential in the manufacturing and R&D a rea to strengthen European competitiveness
  - working together have agreed on CR (both EU & national level) proposals and committed the necessary resources
- PATP will integrate industry, SME, R&D institutions and Academia .

Polish Aerospace Technology Platform

PATP
comprises representation from
4 groups (more then 30 entities):

Airframe

PZL Mielec
PZL Swidnik
Grupa Bielska
Goodrich Krosno
....
Rzeszów UT
Warsaw UT
IMP – Gdańsk
IoA Warsaw

Engine

WSK PZL-Rzeszów
Avio Polska
PWKalisz
WSK KALISZ
....
Silesian UT
Rzeszów UT
Warsaw UT
IMP – Gdańsk
IoA Warsaw

Equipment

PZL Hydral Wroclaw
Radmor
WSK Warszawa II
ATM - Warsaw
.....
Rzeszów UT
WAT
ITWL
.....

ATM

PPL
ULC
PLL LOT
....

SHORT TERM GOALS:

- national SRA created in 2006 – in line with ACARE SRA2
- list all R&D capability / projects that may support both ACARE vision and IMG4 strategy (reduced emission, noise, SFC, etc.) in FP7

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Success story - Industry

FP5 (AERO)

- CAST

FP6 (AERO, NMP, ITS)

- COCOMAT, FRIENDCOPTER, HELISAFE and PARTNER
- KMM-NoE and AVALON
- SPIDER-WIN

FP6 (AERO, NMP, SSA)

- VITAL, NEWAC
- FilmFree, EPATS

FP7 (AERO, NMP, SSA)

- FLEXA, ELUBSYS, MEFISTO

Success story – Academia

Universities

- Częstochowa University of Technology (CUT)
  - FP5 – MOLECULES, TRANSPRETURB, UTAT
  - FP6 – INTELLECT, TIMECOP-AE, FarWake, WallTurb
- Poznań University of Technology (PUT)
  - FP5 - TAURUS
- Warsaw University of Technology (WUT)
  - FP5 – CAPECON, ADFSC II,
  - FP6 - NACRE, NICE TRIP, SimSac, VULCAN, ADIGMA
- Rzeszów University of Technology (RUT)
  - FP7 - HIRT

Success story – R&D Establishment

Institutes

- **Institute of Aviation, Warsaw (IoA)**
  - FP5 - HELIX, X Noise, ViewLS, Diamond VIP, FLITE, HiReTT, UAVnet, NAS-TAURUS
    - Scratch IV - Promoting SME Participation - Contact Point in IoA, PL
  - FP6 - Aeronet III, Adland, HISAC, Air TN, UFAST, Flite 2, CESAR, SOFIA, EPATS
    - Scratch - Promoting SME Participation - Contact Point in IoA, PL
    - Air Transport Net and X Noise Phase 2/3 - Air external noise network

- **Institute of Fluid Flow Machinery, Polish Academy of Sciences, Gdansk (IMP)**
  - FP6 - ARTIMA, AITEB-2, FLIRET, TLC, UFAST (Coordination)

- **Institute of Fundamental Technological Research, Polish Academy of Sciences, Warsaw (IPPT)**

Success story – Summary

Knowledge based production technologies –
WSK Rzeszów, PZL-Swidnik, PZL- Mielec, Ultratech, ATM, Microtech

Aerodynamics CFD and experimental

external flows – CUT, IMP, IoA , PUT, WUT

internal flows and combustion - CUT, IMP, WUT

engines and turbine blades – CUT, IMP, WUT,

Adaptive structures – IMP, IoA, IPPT

Novel concepts – IoA, WUT, RUT

Airplane and rotorcraft systems - WUT

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National SRA - Methodology

- Preparation of National SRA

Methodology & Current results

- 350 technologies listed
- 2 – 52 technologies selected per participant
- 200 technologies of 0 participant
- 59 technologies of 1 participant
- 46 technologies of 2 participants
- 22 technologies of 3 participants
- 12 technologies of 4 participants
- 10 technologies of 5 participants
- 1 technology of 6 participants

- 17 participants:
  - 124 technologies from R&D establishment
  - 121 technologies from industry/manufacturing
  - 0 Airlines, 0 Airports, 0 Regulators & ATM services

High potential of 7FP participation
Real participation will be function
of internal R&D budgets & resources
of PAPT participant

National SRA – Conclusion 1/2

National SRA – Conclusion 2/2

Taxonomy Area and Domain	RUT	WUT	SUT	PCz	IMP	IoA	IPPT	ITWL	MRLIAE	PZL-Swidnik	PZL-Mielec	P&W Kalisz	WSK Rzeszów
01. Flight physics	5	5		2	14	18	2			6	3		
02. Aerostructures	3	3	1		4	13	1			21	16	9	10
03. Propulsion	5	4	1	7	9	12		1				2	11
04. Aircraft Avionics, Systems & Equipment	6	10			2	7	1			20	10		
05. Flight Mechanics - Performance	1	2									2		
06. Integrated Design & Validation (methods & tools)	12	8			1	3		1		1	4		
07. Air Traffic Management (Source ARDEP)		1				1		1	1				
08. Airports									1				
09. Human Factors	6					8		1					
10. Innovative Concepts & Scenarios	2	5	1			6	1			4	3		
2. Aerostructures	4		1					1				3	3
4. Aircraft Equipment							1						
6. Integrated Design & Validation (methods & tools)	2							4	2				
8. Airports								2					
9. Human Factors								1					
10. Innovative Concepts and Scenarios	1												
Suma końcowa	**47**	**38**	**4**	**9**	**30**	**68**	**6**	**12**	**4**	**52**	**38**	**14**	**24**

PATP involvement in FP7

- PAPT stakeholders (only 11 organisations) submitted 64 proposal in Call 1 & 2:
  - CR projects: L1, L2
  - SCA
- Tasks are linked with 50 various technologies from both SRA2 & National SRA

JTI figures are not included

Results

PAPT in EU

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Thank You!

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