

Czech-Ukraine co-operation in Aviation



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History-Geographically

Appreciate History and Develop Future

- ▶ Czech(and Slovaks) and west part of Ukraine have been members of Austria-Hungary Empire before 1st World War.
 - Centre of Lvov has typical Austro-Hungarian architecture
- ▶ Part of west Ukraine belonged to Czechoslovakia between 1st and 2nd World War
- ▶ Czechoslovakia (and Austria) was bridge between East and West after 2nd World War. Ukraine can play this role now.

Common Aviation Projects

L-39 Albatros

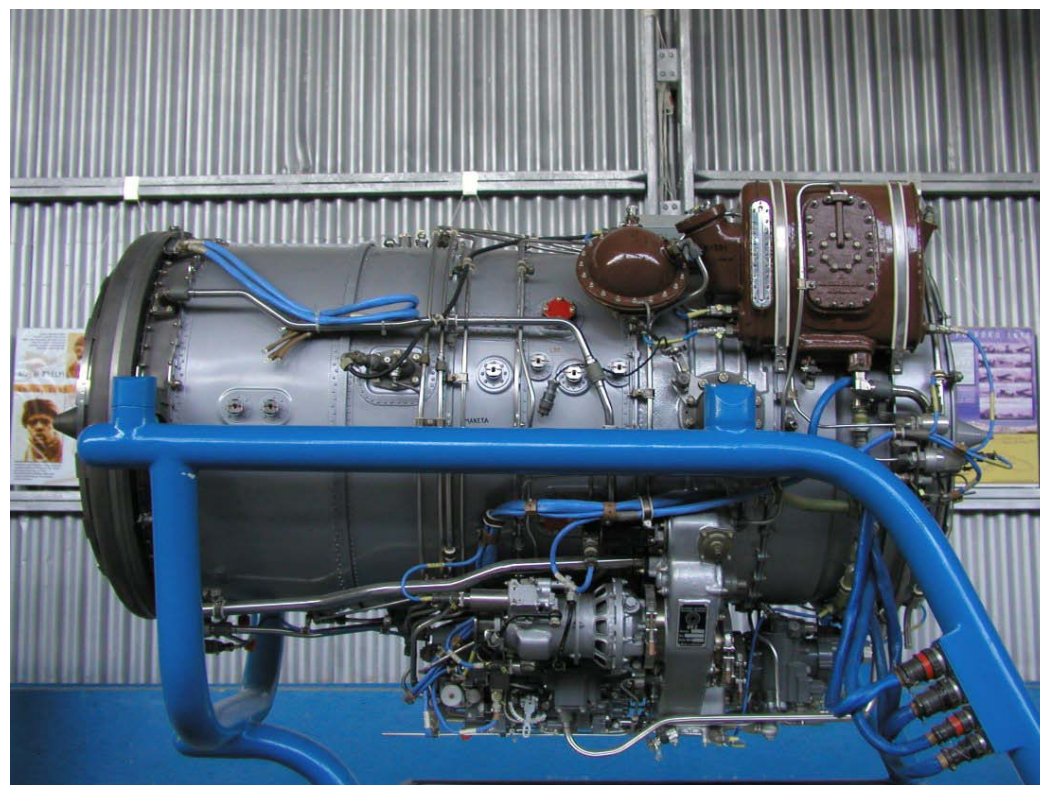
- Manufactured in Aero Vodochody
- About 1500 pcs produced
- Engine Al-25I designed by Ivcenko Progress and manufactured by Motor Sic



Common Aviation Projects

L-59 Super Albatros

- ▶ First flight 1986
- ▶ About 60 airplanes manufactured
- ▶ Engine DV-2 developed by Ivcenko Progress
- ▶ Engine was replaced by Honeywell F 124 engine and after modernization it was renamed to L-159



Engine AI 450 S-2 for EV 55

- ▶ Airplane developed by Evezor
- ▶ 9-14 seats
- ▶ Under certification

- ▶ Alternative engine being developed by Ivcenko Progress and Motor SIC
- ▶ Expected test flight with new engines 2014



R&D FP6 – CESAR

Cost Effective Small Aircraft

- ▶ Completed in 2010
- ▶ 39 Companies, 14 Countries
- ▶ Budget – 33.7 mil Euro, contribution 18.1 mil Euro
- ▶ Project Coordinator – VZLU Prague
- ▶ Engine Manufacturers - Turbomeca, Ivchenko Progress, PBS
- ▶ Task 3.2 Propulsion integration, Leader **Ivchenko Progress**, participants: PBS, Unis, Jihostroj, Evektor, Mesit, VZLU

R&D FP7 – Esposa

Efficient Systems and Propulsion for small Aircraft

- ▶ FP7 Program: 4th call FP7 EU - Aeronautics, Level 2 project
- ▶ Project period: 4 years (last year demonstration phase) expected run 2011-2014
- ▶ Project estimated budgeted: 25-32 mil. EUR
- ▶ Number of participants: approx. 35
- ▶ Coordination: PBS (engine and APU manufacturer), EIMG member, experienced in EU projects
- ▶ Ivcenko Progress and Motor SIC are Ukraine participants

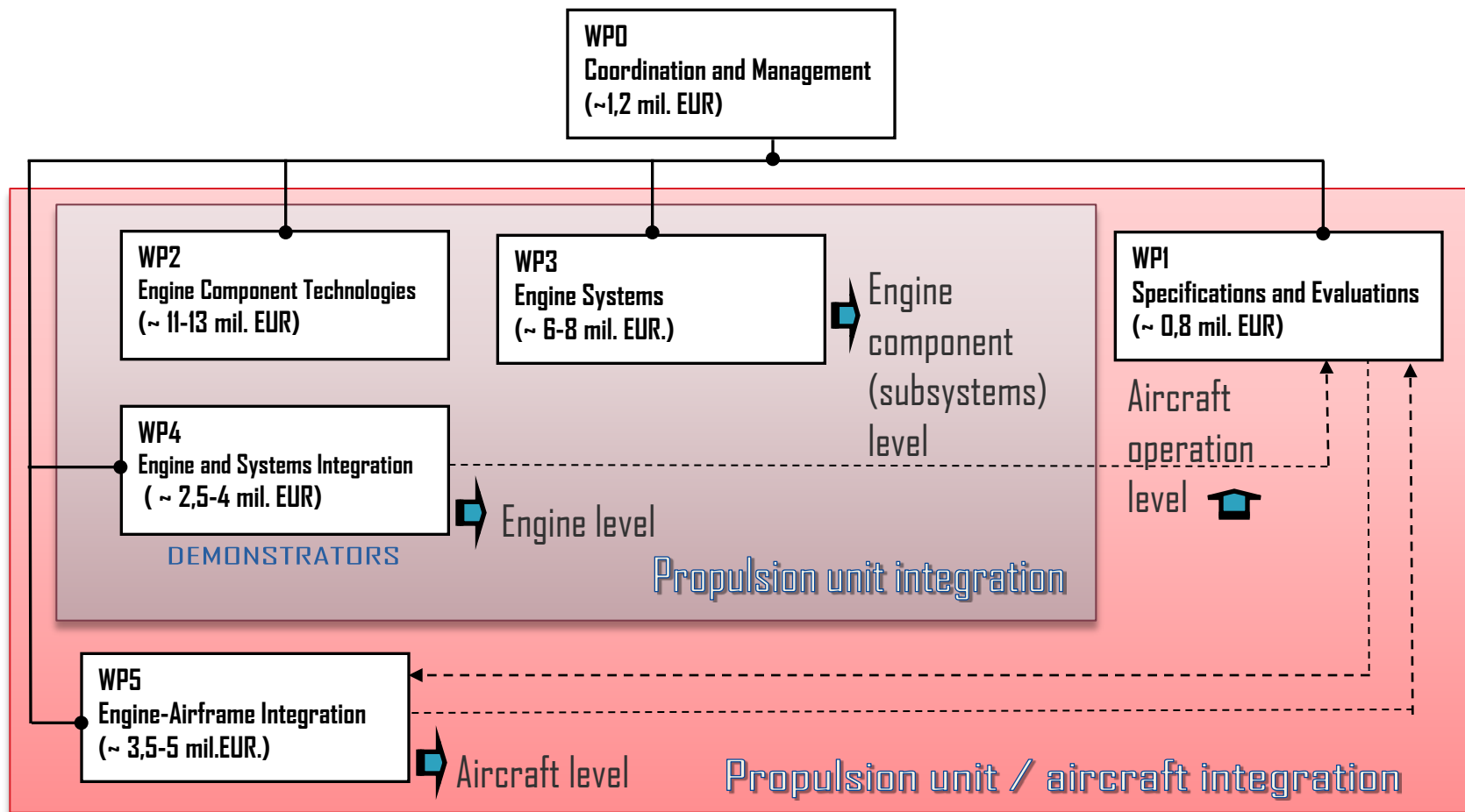
Esposa – Project background

- ❑ ESPOSA project addresses commitments of "An Agenda for Sustainable Future in General and Business Aviation" adopted by the European Commission on 11 January 2008 as well as the European Parliament resolution approved on 3 Feb 2009.
- ❑ ESPOSA is a follow-up of the integrated project CESAR (Cost Effective Small AiRcraft) in the area of propulsion and systems.
- ❑ ESPOSA is supported by ALV CR (Association of Aviation Manufacturers of the Czech Rep.). ALV CR is a member of ASD.

Esposa – Project background

- The project idea evolved from central and eastern European countries (New Member States), at the beginning driven by industrial interests of Czech, Polish and Ukraine industries. However, gradually ESPOSA acquired truly European dimension with a wide spectrum of EU countries involved.

Esposa –Project Structure



Esposa – Motivation of Industry

- ▶ Limited choice of affordable and modern efficient turbine engines
- ▶ Low operating costs – turbine can have lower maintenance costs than piston engine, AVGAS100 fuel has limited availability
- ▶ Safety aspects – pilot workload reduction
- ▶ Market opportunities – General aviation (GA) and commuters is growing worldwide. Project gives opportunity to Ukraine Companies to establish on European market and European Companies to penetrate in to Russian market.

Conclusion

- ▶ Let's help Ukraine to be a bridge between West and East. To ensure exchange of cultures, ideas, technologies and to create a profitable business among all of us.

Thank you for your attention!

