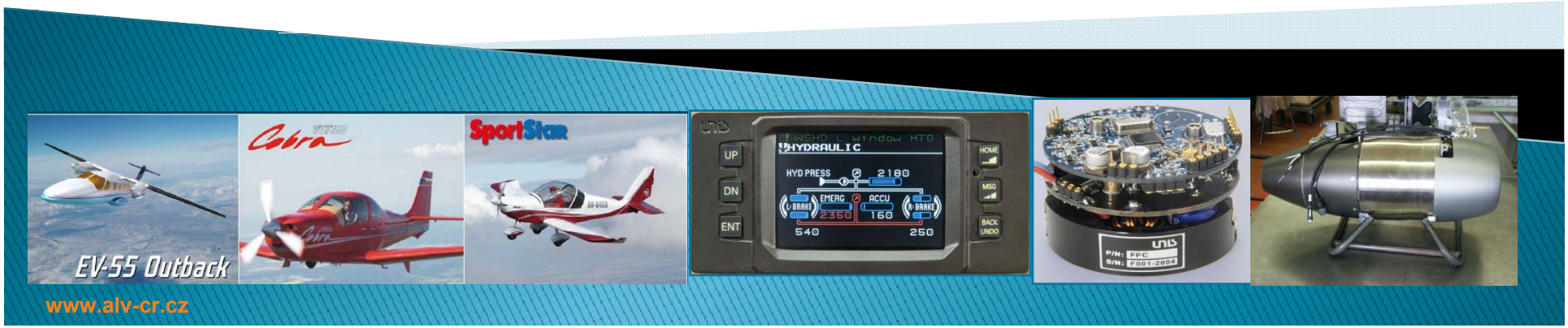
Czech National Aviation Approach till y. 2020

Jiří Kovář – ALV/Unis



Structure of the Industry

- Most of the Companies are ALV (Association of Aviation Manufacturers) members
- ALV represents 39 Czech aviation Companies
- 11 000 employees
- Turnover about EUR 700 million Euro
- ASD (AECMA) member since 1st January 2000

Structure of the Industry

Number of companies (number of employees)

Except R&D, Education, Air Traffic Control

- More than 1000 employees 1
- 250 – 1 000 employees 8
- Less than 250 employees /SME/ …… 24

(about 15% in aeronautical research and development)

Structure of the Industry

- Manufacturing…… 31
  - Final airplane manufacturers …… 2
- R&D, testing …… 3
- Maintenance …… 2
- Air Traffic Control …… 1
- Education …… 1
- Publishing …… 1

Structure of the Industry

Ownership

- Owned by major international player ……. 3
- Private ownership …… 31
- State owned companies …… 5

Location

- Moravia (Kunovice, Brno)
- Bohemia (Vodochody, Prague)

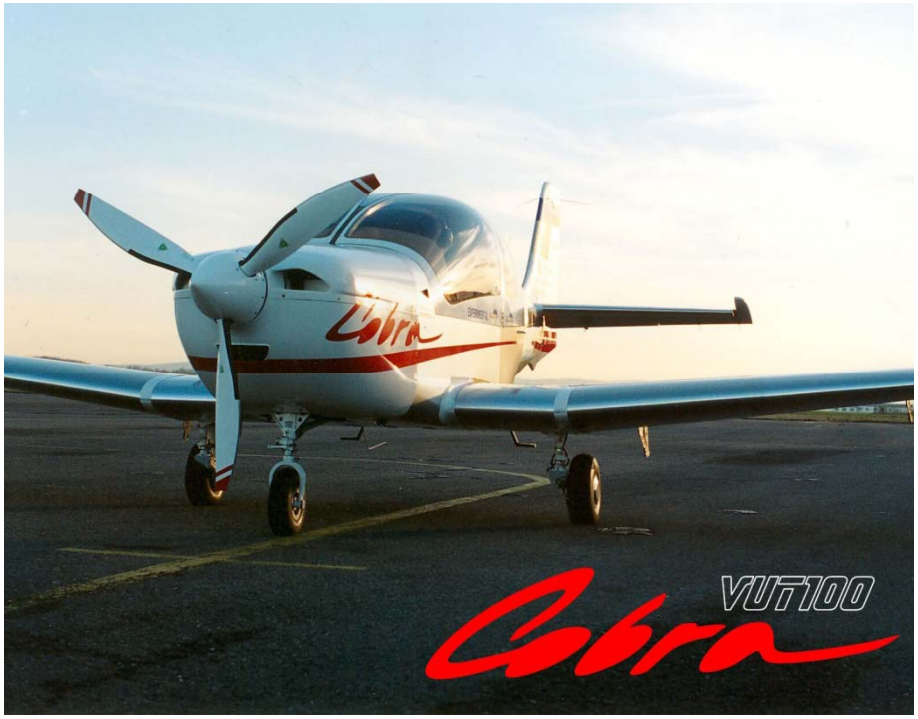
- Diversified, Integration is needed

Current Final Products

General Aviation

VUT 100 Cobra

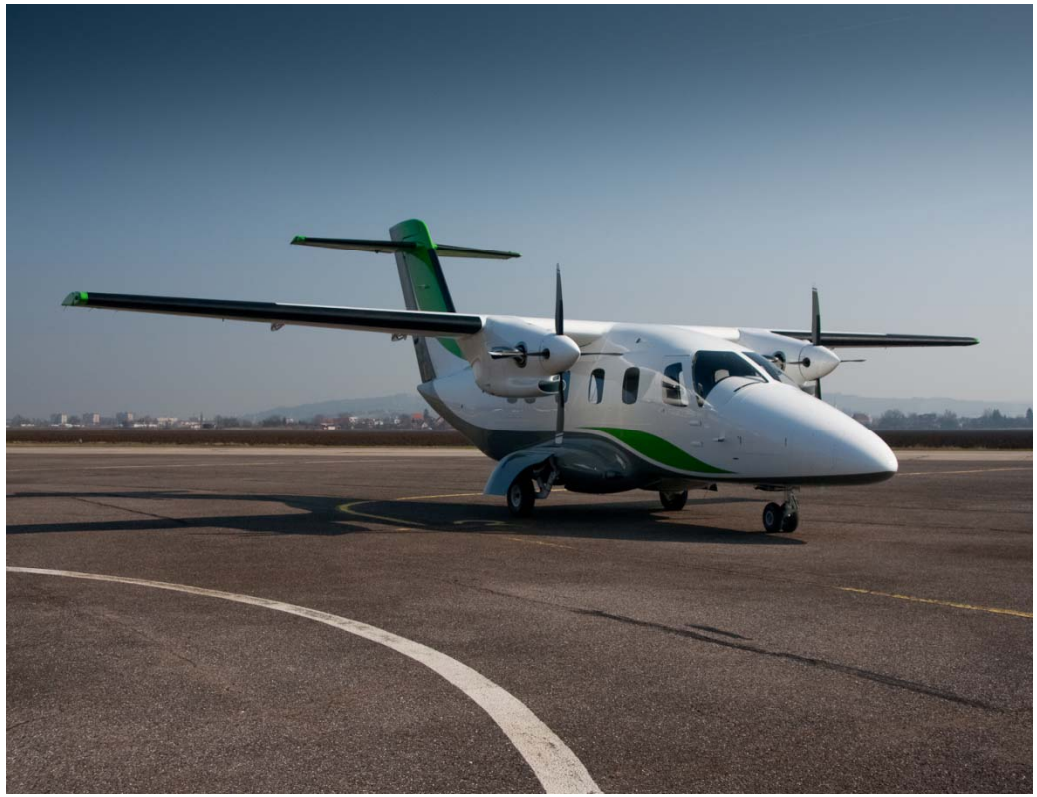
- 4 seats airplane
- Design Evektor and Brno University of Techology
- Manufacturer: Evektor
- Status: in certification and production as Experimental



Current Final Products

EV 55

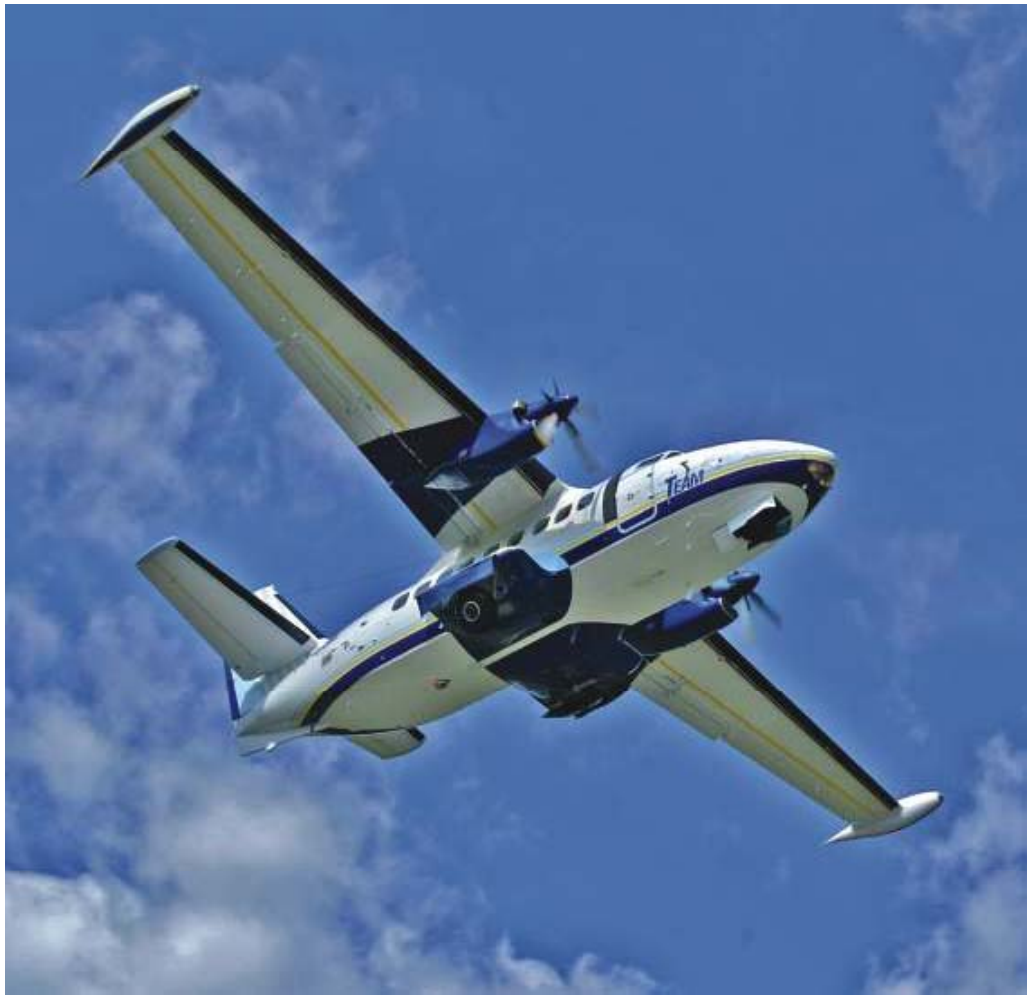
MTOW	4 600 kg
Payload	1 824 kg
Seats	9 – 14
Manufacturer	Evektor
Status	in certification



Current Final Products

L410/420

- Seats 19
- Manufacturer Aircraft Industries (LET)
- More then 8000 produced
- Status In production and modernization



Participation in R&D

Participation in National programs

- Program TIP 2010 of Ministry of Industry
  - 7 projects (cca 18 mil.Euro)
- 3 members of ALV founded Centre of Aviation and Space Research (CLKV), The most successful center under Ministry of Education

- Vice President of ALV was appointed in to government advisory committee for R&D

Participation in R&D

European Projects

- Cesar 2005-2010 coordinated by Czech Republic, 39 participants, 33.9 mil Euro

Level 2, 4th call big projects

- LEMCOTEC, participants PBS, VZLU
- PALOMA
- HUCCE
- SARISTU, participant VZLU
- ESPOSA , participants Unis, Jihostroj, Honeywell, PBS, Evektor, VZLU, VUT
- ACTUATION 2015, participant Unis

Summary in FP

Call/FP	Applied proposals			Success CR %	Everage EU %
	No.	Accepted	Rejected		
4. FP	2	2	0		
5.FP		14			
1st call FP6	33	10	23	30.3	35
2nd call FP6	42	9	33	21.4	34
3rd call FP6	62	35	27	56.5	34
Call DGtren	8	8	0	100	34
1st call FP7	33	11	22	33.3	25
2nd call FP7	63	5	58	7.9	21
3rd call FP7	51	9	42	17.6	23
Total FP6&7	292	87	205	29.8	

Strengths of Czech Aviation Industry

- Experience in management of projects organized and funded by EC (CESAR)
- Long time tradition of Aviation Industry
- Availability of Complex Capabilities including:
  - R&D
  - Testing and Certification
  - Production of Components and Sub-assemblies
  - Final Aircraft Assembly
- Well established chain of Aviation Education, Research and Development centers
- Proven Experience in development, certification, production, marketing & sales of airplanes up to 20 seats

Future of Czech Aviation Industry

Strategic objectives

- Remain world leader in LSA category of aircrafts
  - CR 27%, Germany 25%, USA 25% of the World market in 2008
- Become European leader in sport airplanes and small regional airplanes up to 19 passengers
  - Aircraft Industry (LET), Evektor, Zlin,

Future of Czech Aviation Industry

Strategic objectives

- Become respected partner and supplier of components for European aviation industry
  - Manufacturing and Assembly (Aero)
  - Engines development and manufacture (PBS, GE-Walter)
  - Systems development and manufacture
    - Electronic (Unis, Mesit)
    - Hydraulic (Jihostroj)

Future of Czech Aviation Industry

Strategic objectives

- Get substantial participation on development and production of future European aircraft for les then 100 passengers

Assumptions

- Airbus forecast for fleet grow till 2020 for airplanes >100 seats will be from 14000 to 22000-29000

- Such increase of transportation requirements cannot be achieve by big airplanes only, regional aircrafts have to be involved

- Europe has to act accordingly, otherwise it will loose technical leadership

Long term forecast

Long-term Forecast of Airbus for Commercial Aircraft

Category	Airplane fleet					New deliveries 2008 - 2028			Replace-ment as a percentage of 2008 fleet in %
						total	thereof		
	2008		2028		Aagr		replace-ment	expan-sion	
	Units	Shares	Units	Shares	% [1]		Units		
VLA	24	0.1%	1318	3.6%	22.2%	1294	0	1294	0.0%
Intermediate twin aisle	924	4.4%	1861	5.1%	3.6%	1705	768	937	41.3%
Smal twin aisle	2261	10.9%	4454	12.3%	3.4%	4097	1904	2193	42.7%
125 / 250-seats	9254	44.6%	18047	49.7%	3.4%	14734	5941	8793	32.9%
100-seats	1553	7.5%	2431	6.7%	2.3%	2243	1365	878	56.1%
70 / 85-seats	1305	6.3%	4053	11.2%	5.8%	3610	862	2748	21.3%
50-seats	5444	26.2%	4139	11.4%	-1.4%	2468	3773	-1305	91.2%
Total	20765	100.0%	36303	100.0%	2.8%	30151	14613	15538	40.3%

Source: Airbus 2009, own calculations.

Vision

- Europe should decide if it wants to be word leader in regional aircrafts. This is political and economical decision.
- New aircraft generation will be based on results of ongoing and new R&D programs
- New Member States and well established European companies should be involved
- Joint Programming approach and top level European coordination will be necessary

Thank you for attention