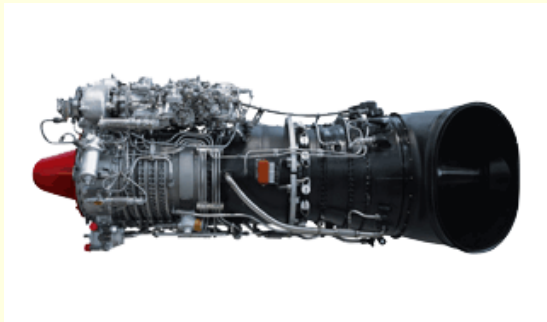


**“D un D centrs”, 7, Margrietas str., Riga, Latvia,  
Aleksy Mironov, CEO, [info@ddcentrs.lv](mailto:info@ddcentrs.lv) ; [www.ddcentrs.lv](http://www.ddcentrs.lv)**

## **Vibration Monitoring & Diagnostics**

### **Main specialties:**

- R&D of vibration diagnostic techniques for gas turbine engines (GTE),
- Scientific tool – new spatial model of GTE casing vibration,
- Methodology - Vibration Passport technology (frequency range 0...25kHz),
- Application developed for helicopter GTEs.



Project idea - Jet Engines Condition Monitoring

Need partners: manufacturers, research & testing centres

### Topics in interest for collaborative projects

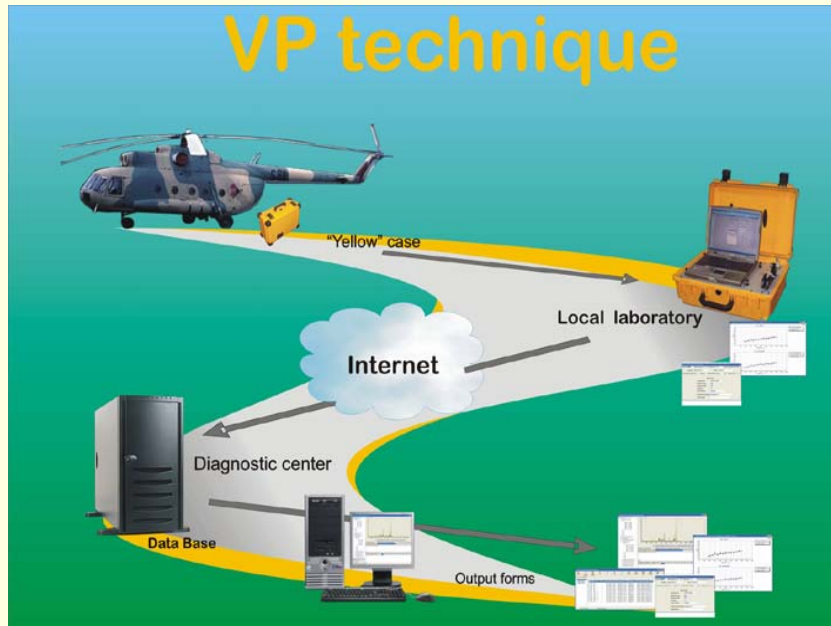
AAT.2010.1.2-2. Maintenance and disposal CP-FP

AAT.2010.6.1-4. Life-cycle CP-FP

AAT.2010.7-6. Stimulating research with International Cooperation Partner Countries (Russia)

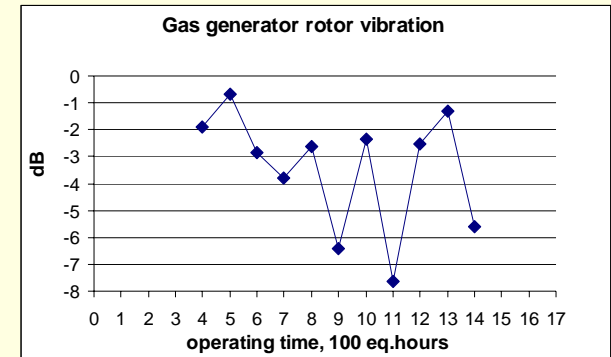
# Vibration monitoring system of helicopter engines

## Trial application for Russian Mil helicopters

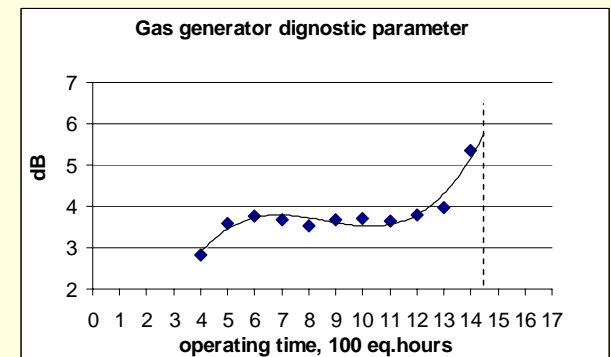


- vibration check during engine operation check after a scheduled maintenance
- portable set conforming to field conditions
- automatically operation
- no connections to aircraft systems

## Vibration parameters evolution to operating life



## Typical rotor vibration parameter

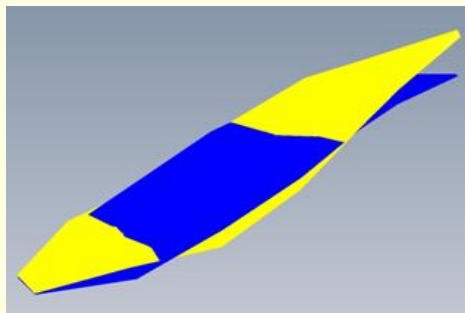


## Vibration passport parameter of gas generator

# Activities within FP6 projects

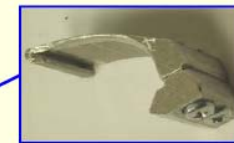
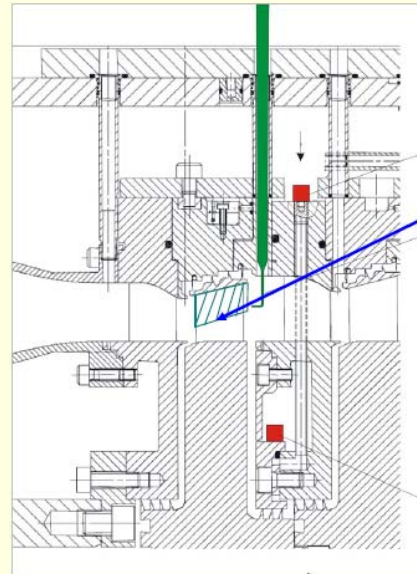
## NICETRIP

Modal analysis of blades



## SUSPOWER

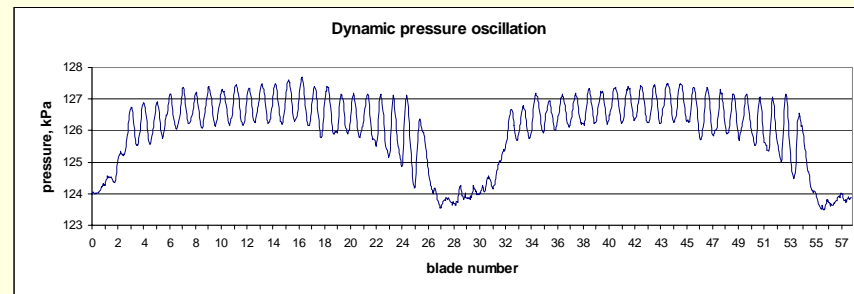
Airflow irregularities simulation and vibration research on the Siemens test turbine



Rotating disturbance created by partial blocking of rotor channels



Variants  
1-1  
2-2  
3-3  
5-5

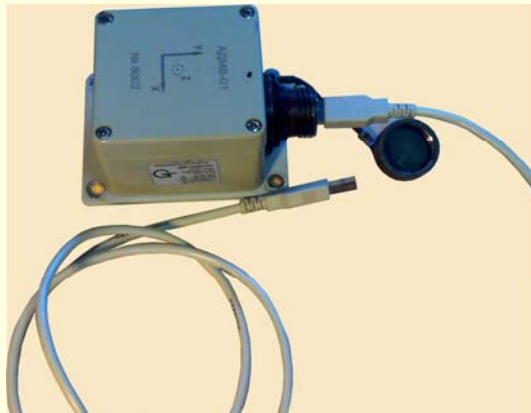


# Spheres of potential collaboration

## Buildings & Structures Monitoring

---

Automatic station for building vibration monitoring



Cell tower status/rigidity monitoring by automatic mini stations

