

Colibrys

'Your Reliable Silicon MEMS partner'



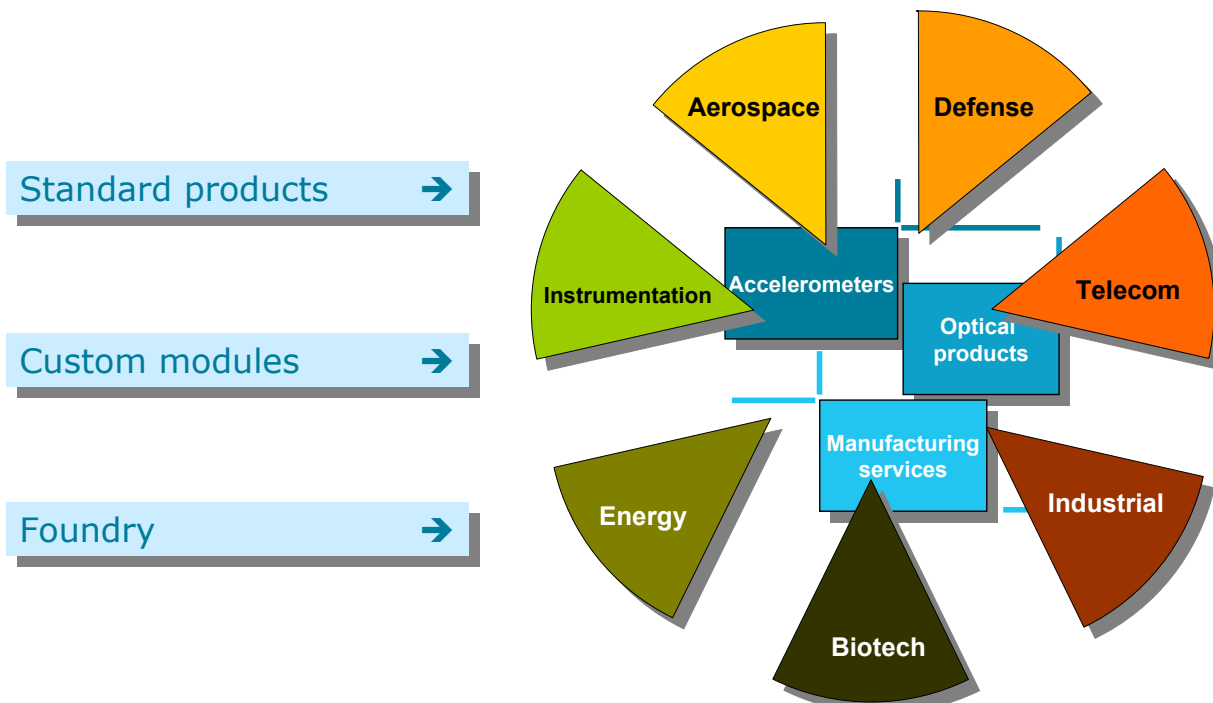
- Colibrys Switzerland → Neuchâtel
- Colibrys Inc. → Stafford, TX



Colibrys SA, Felix Rudolf
1.6.2005 Colibrys SA
Headquarters in Switzerland, Neuchâtel



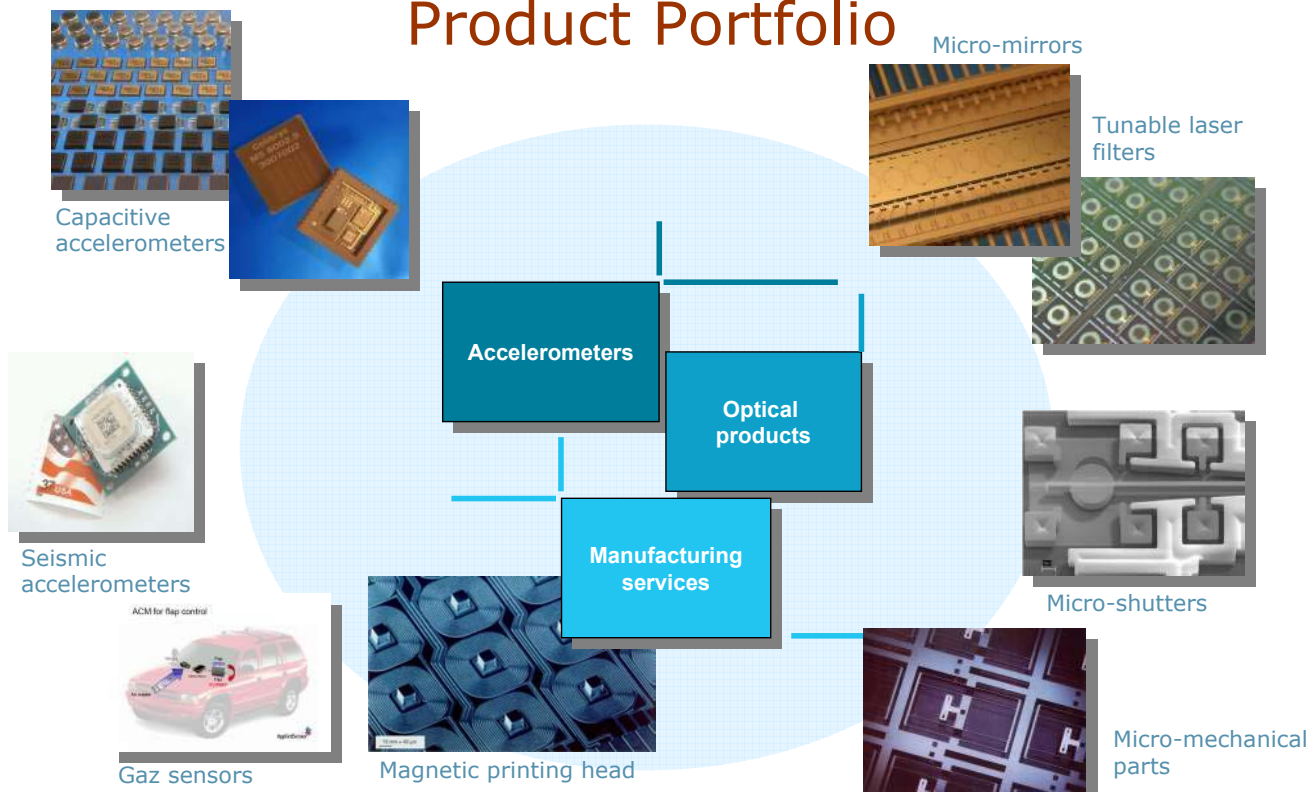
Market and Competences



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Product Portfolio

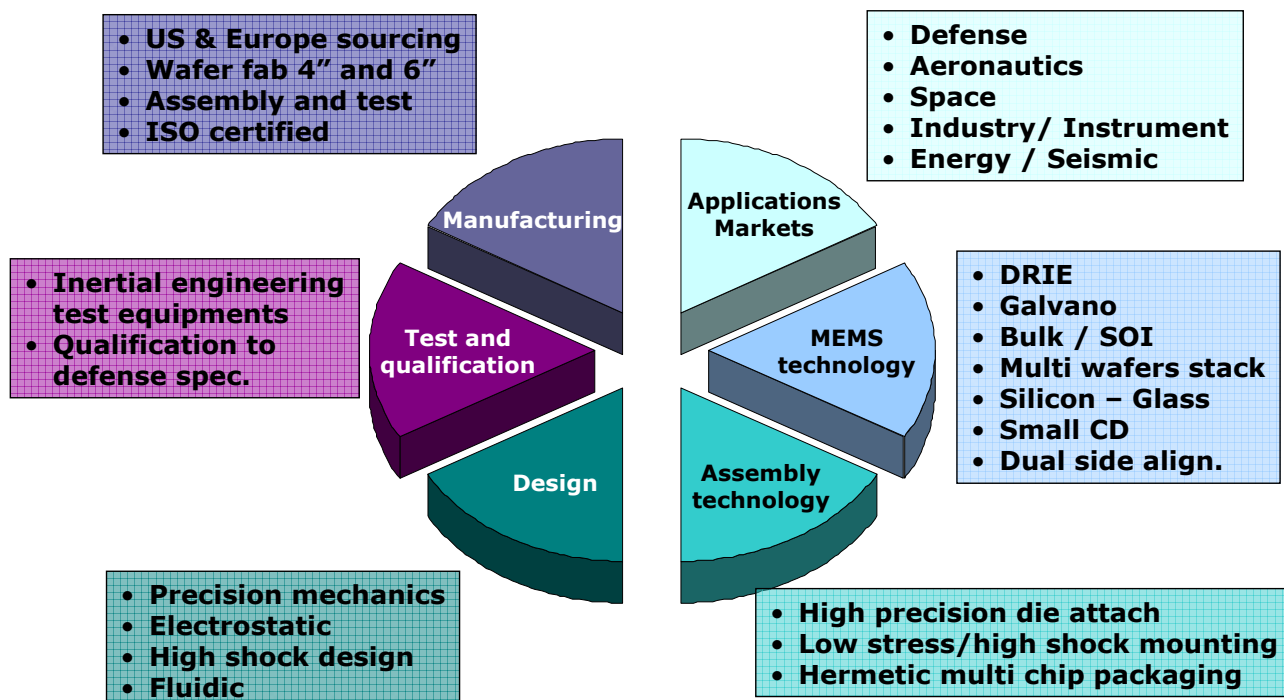


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Colibrys Core Competencies



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Key requirements in professional markets

- Precision instruments are used harsh environment:
 - Shock, vibration
 - Temperature
 - Fluids
 - High performance
 - High performance
 - Long term stability
 - Reliability
- Need for innovative cost efficient die attach and packaging solutions



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Packaging needs

- Shock proof low stress die attach
 - Mechanical low pass filtering,
 - Special measures for high long shocks
- Vacuum sealing (10^{-3} mBar)
 - Wafer level packaging
 - Ceramics housings
 - Getter technologies
- Challenges:
 - Understand materials issues:
 - stress (variation under harsh conditions)
 - fracture
 - Out-gassing / getter pumping
 - Modeling of long term packaging behavior
 - reliability, stress, pressure, chemical and bio degradation

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Design for manufacturing

- System design
 - Methods and tools well established
- MEMS technology/chip design
 - Modeling well established
- Package design
 - Many technologies exist
 - Design lacks models and material characteristics for predictable results
- Test
 - Still very cost intensive product specific engineering

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