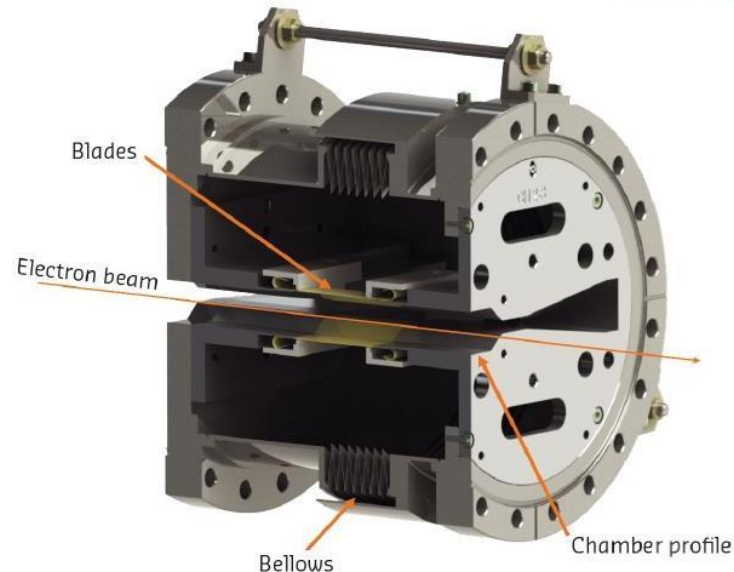


- The new fourth-generation ESRF-Extremely Brilliant Source (EBS) storage ring features new vacuum chamber profiles with reduced aperture.
- Radio frequency (RF) fingers are a key component to ensure good RF conditions and reach the best possible machine performance.
- A more compact, more robust and more reliable RF finger design has been produced for the new storage ring.



<http://www.esrf.eu/files/live/sites/www/files/Industry/acquire-esrf-technologies/thumbnails/RF%20Fingers.pdf>

Technology Transfer proposal BSBF 2022

# Proposal SWOT Analysis

## Strengths

- Compact and reliable RF finger design
- Optimal electrical and geometrical vacuum vessel continuity
- Wide axial and angular alignment strokes for relative flange movement flexibility
- Tested and validated with the new ESRF-EBS ring
- Cost effective, simple design easy to install

## Weaknesses

- None

## Opportunities

- Application in MBA synchrotron storage ring designs where lattices enforce compact instrument designs. Including RF fingers
- Potential in accelerators or systems where vacuum vessels require high-reliability RF fingers in small spaces

## Threats

- As far as known, this is a unique solution

- The technology is patented.  
EP 3 223 591 A1

- For further information, the contact point is Ed Mitchell ([mitchell@esrf.eu](mailto:mitchell@esrf.eu))
- The European Synchrotron is an intergovernmental research organisation based in Grenoble, France.
- It develops and operates the world's **first high-energy fourth generation synchrotron light source**.
- Serving over 7,000 visitors from academia and industry every year, it provides state-of-the-art synchrotron X-rays for the study of materials and living matter.