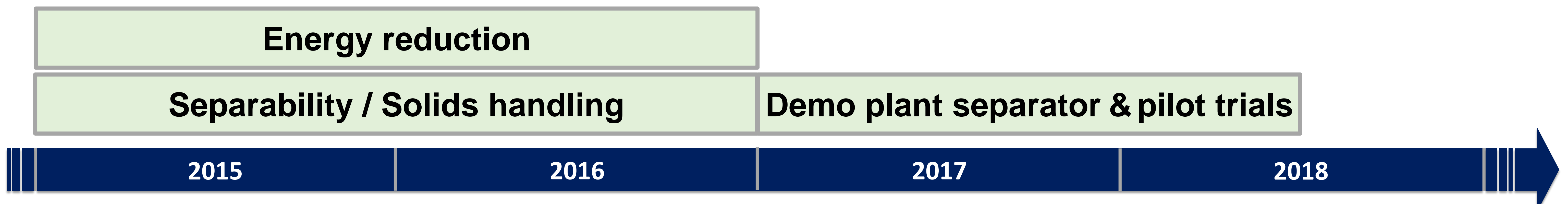


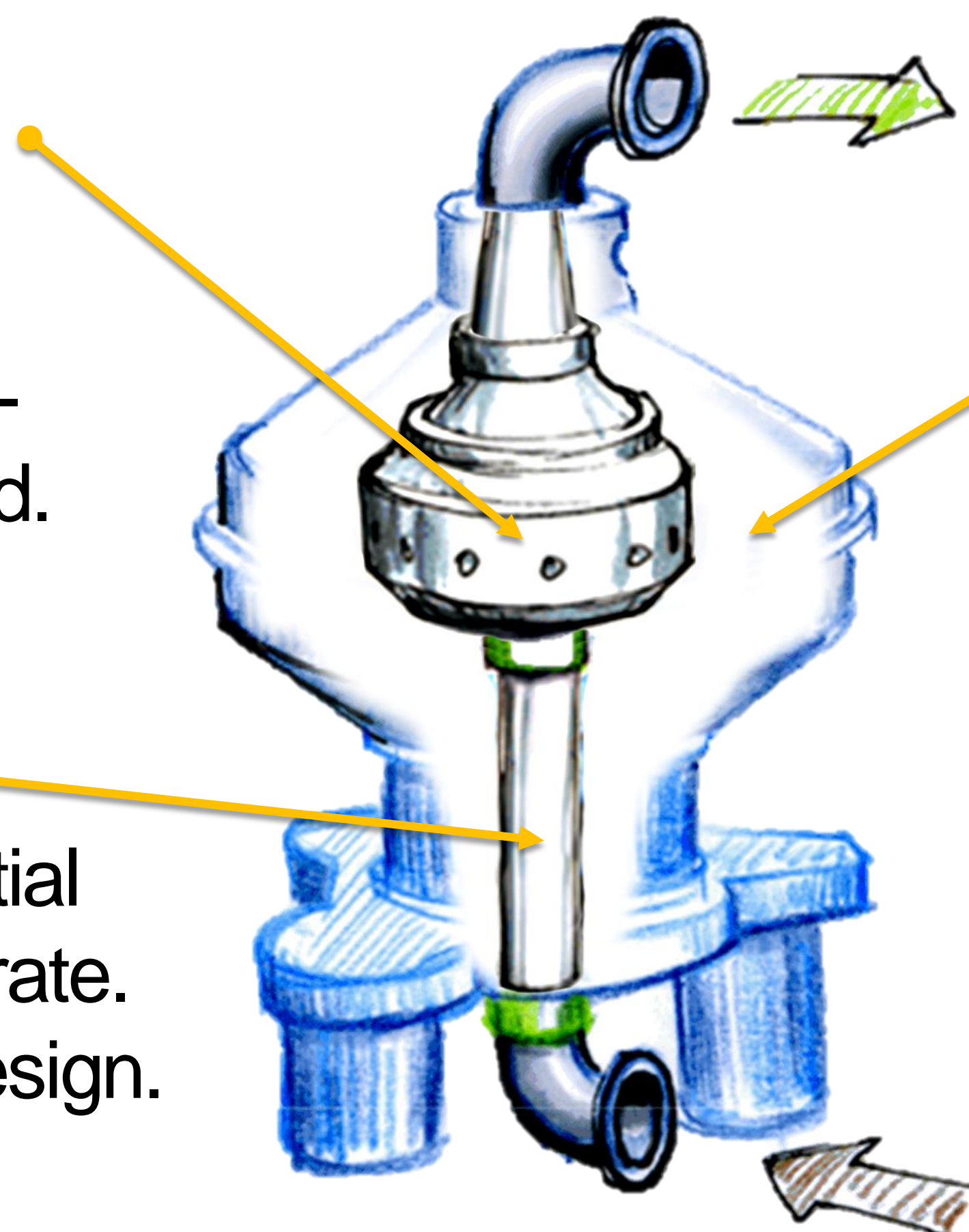
Cell removal from fermentation broth using centrifugal separation

Alfa Laval Tumba AB: S Szepessy, C Thorsson, P Thorwid, C Häggmark, S Königsson, O Törnblom. BASF SE: T Merkel



Energy reduction by 50%

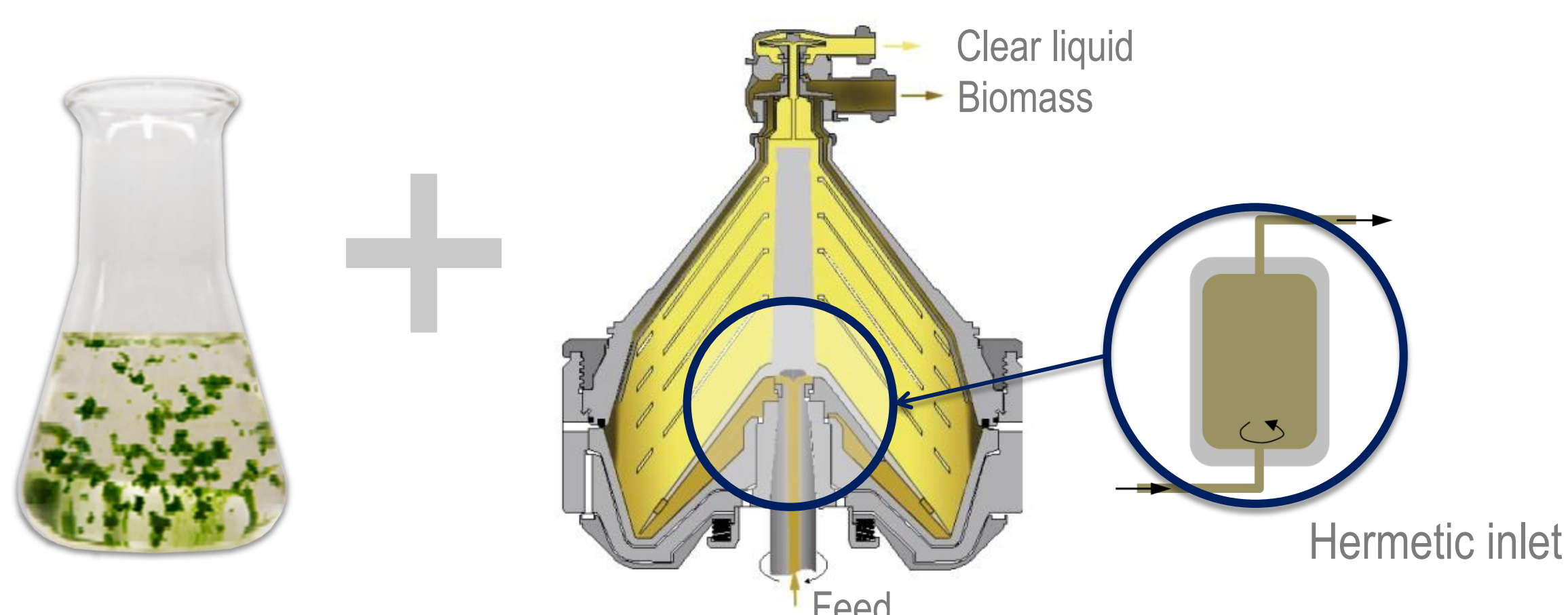
- **Reduce power losses**
Loss of rotational momentum is an issue encountered with conventional outlet devices at a finite radius. By use of centre-to-centre design, these losses are reduced.
- **Reduce pressure losses**
Internal pressure drop generates substantial pressure losses when increasing the flowrate. These are reduced by using novel inlet design.



- **Reduce air friction**
The rotor has high peripheral speed exceeding 200 m/s. Air friction causes considerable power losses and heat generation. Both can be reduced by applying vacuum outside the rotor.

Separability/Solids handling

- **Improve efficiency by combining separation and chemistry know-how**
Smooth flow, low shear design and selected flocculation methods to improve efficiency and thereby reduce investment. Special rotor features handling large solids volumes are incorporated.



Demo plant separator

- **Versatile and scalable**
A demo separator unit incorporating the novel features is designed for tests with fermentation broth. The unit is versatile comprising several variants and is scalable to larger sizes.



PRODIAS CONSORTIUM



ABOUT THE PROJECT

- Start date: 1st January 2015
- Duration 48 Months, until 31st December 2018
- Budget: 14 million €
- Project web site: www.spire2030.eu/prodias/



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