

# *“A game changer in rotating equipment”*



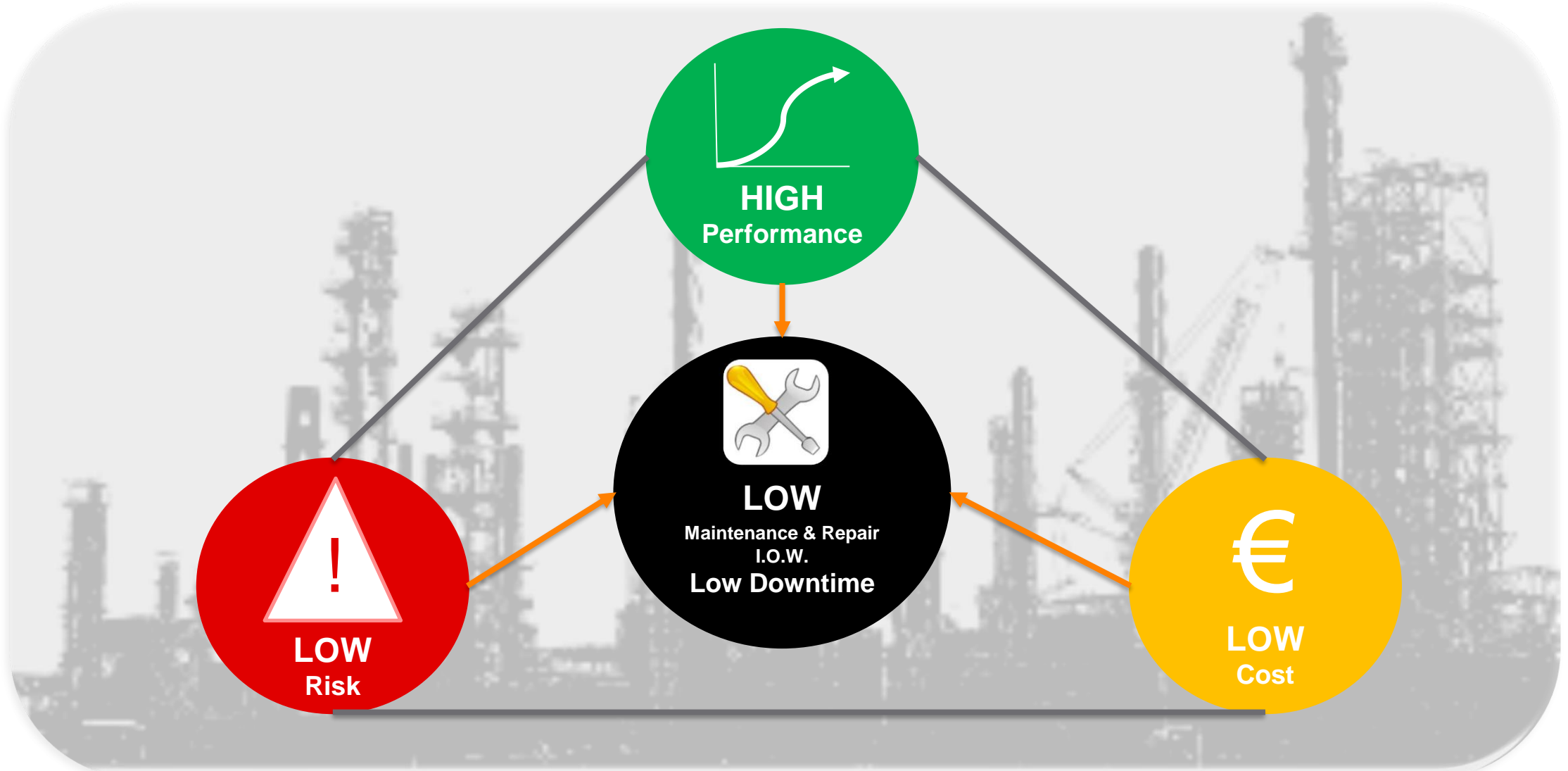
14 mei 2020

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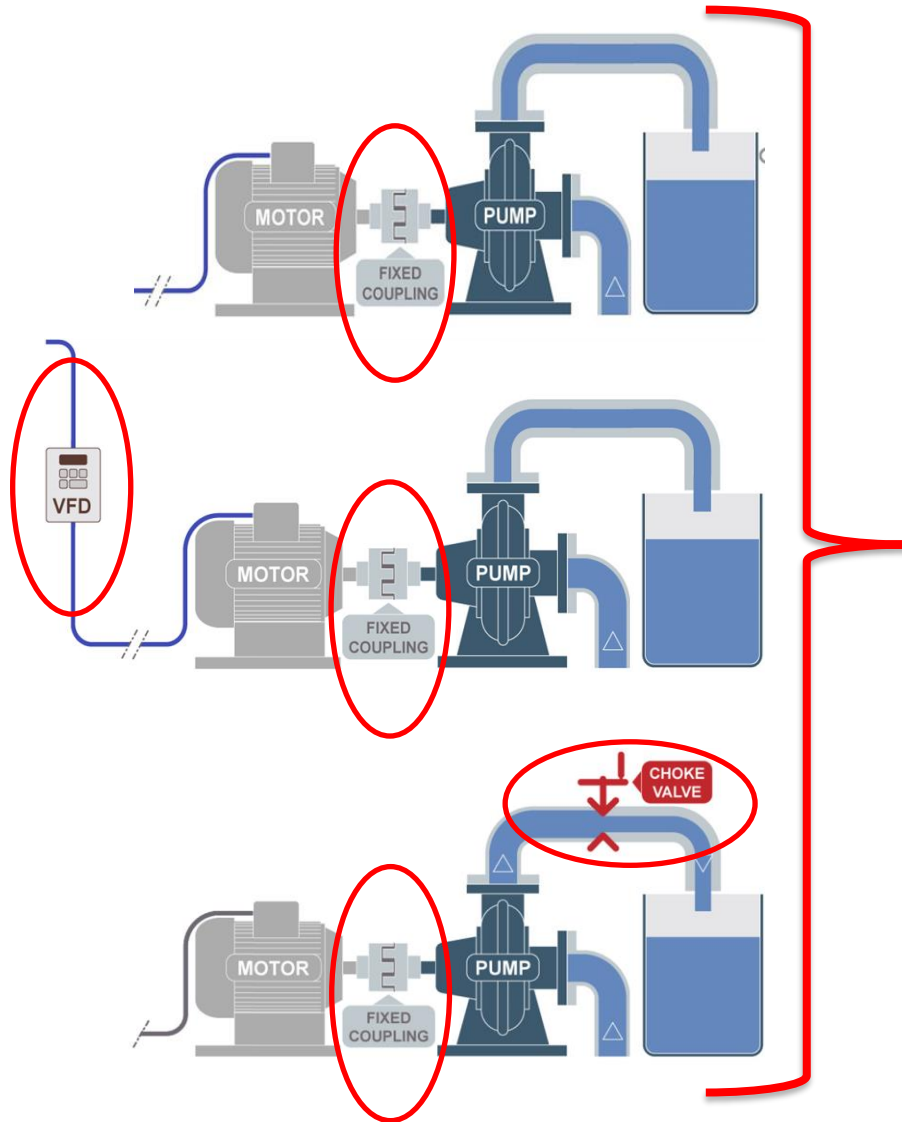
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# Objectives in the Industry



# Actual reliability rotating equipment

## Example Pump System



### CAUSING

- Misalignment
- Vibrations
- Leakages
- Cavitation
- Limited MTBR/MTBF
- Harmonics
- Bearing currents
- Random failures
- Limited lifespan
- Noise
- Inefficiency
- Energy waste
- Unsafe situations
- Lack of technically skilled labor
- Etc. etc.

### ARGUMENTS

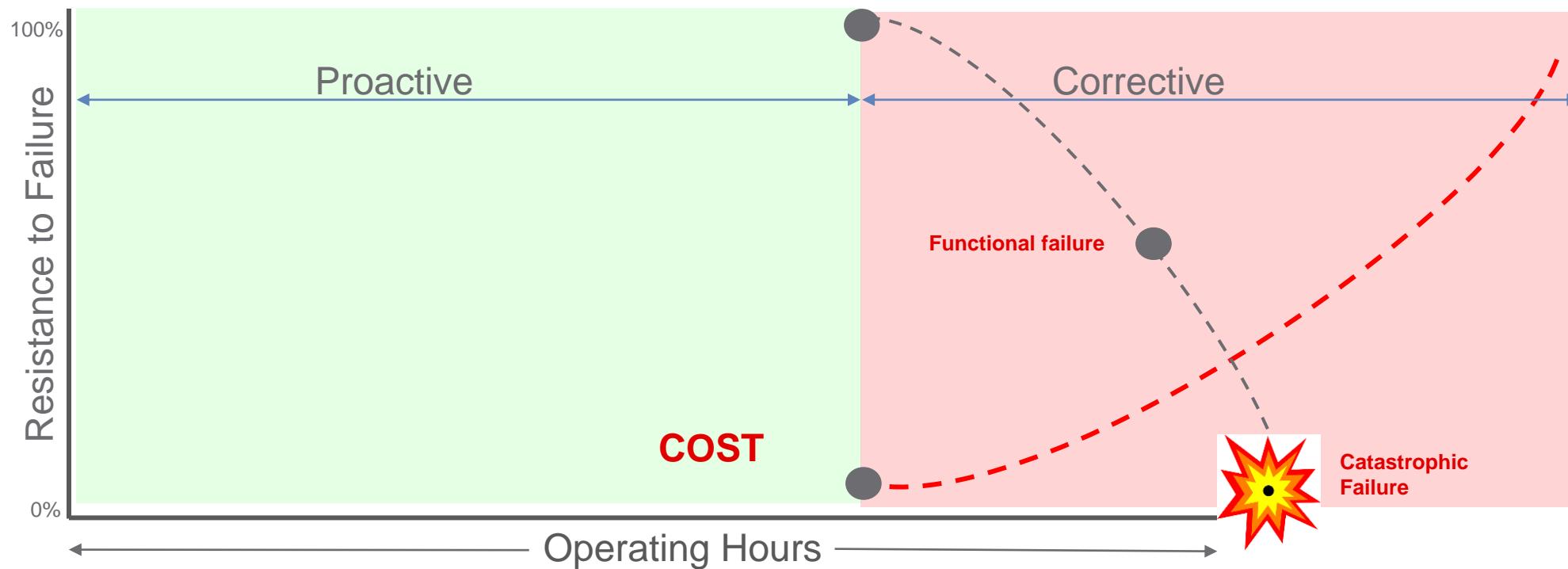
- “We have been doing this for decades”.
- “There are no better alternatives”.

65% of all electric consumption in the industry comes from electrical rotating equipment.

75% of the pumps in the industry is too large.

(Fraunhofer Institute).

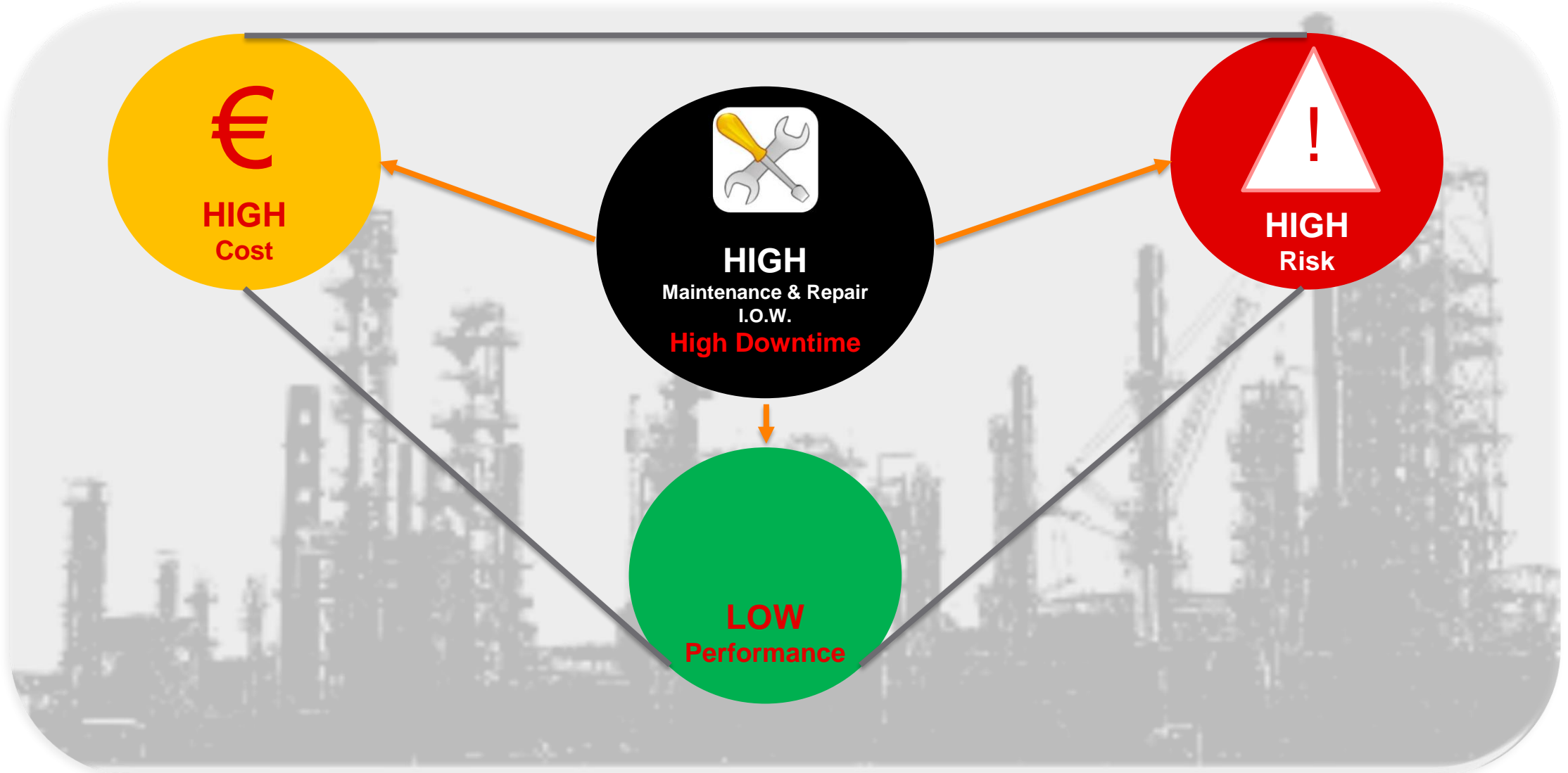
# Actual resistance to failure



Largest opportunity for improvements

Opportunities for improvements are low

# Actual situation in the Industry



# Demonstration

More info at [www.zytec.eu](http://www.zytec.eu)

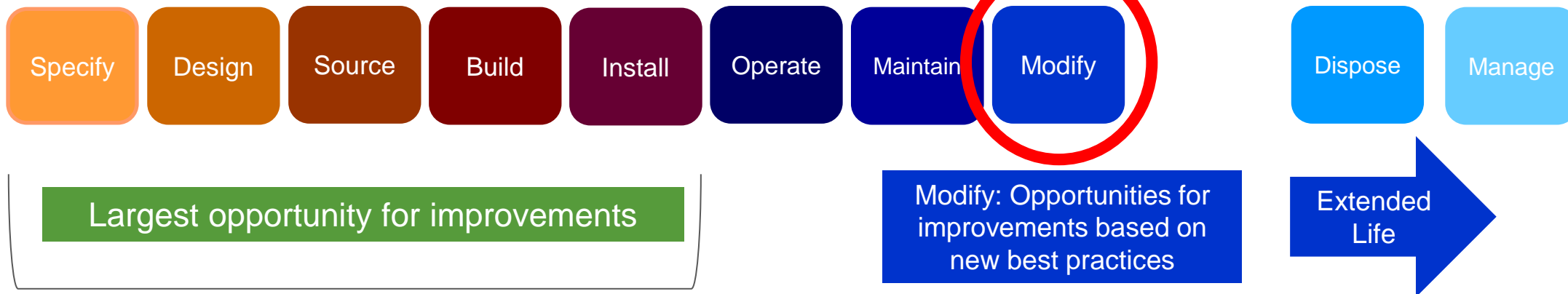
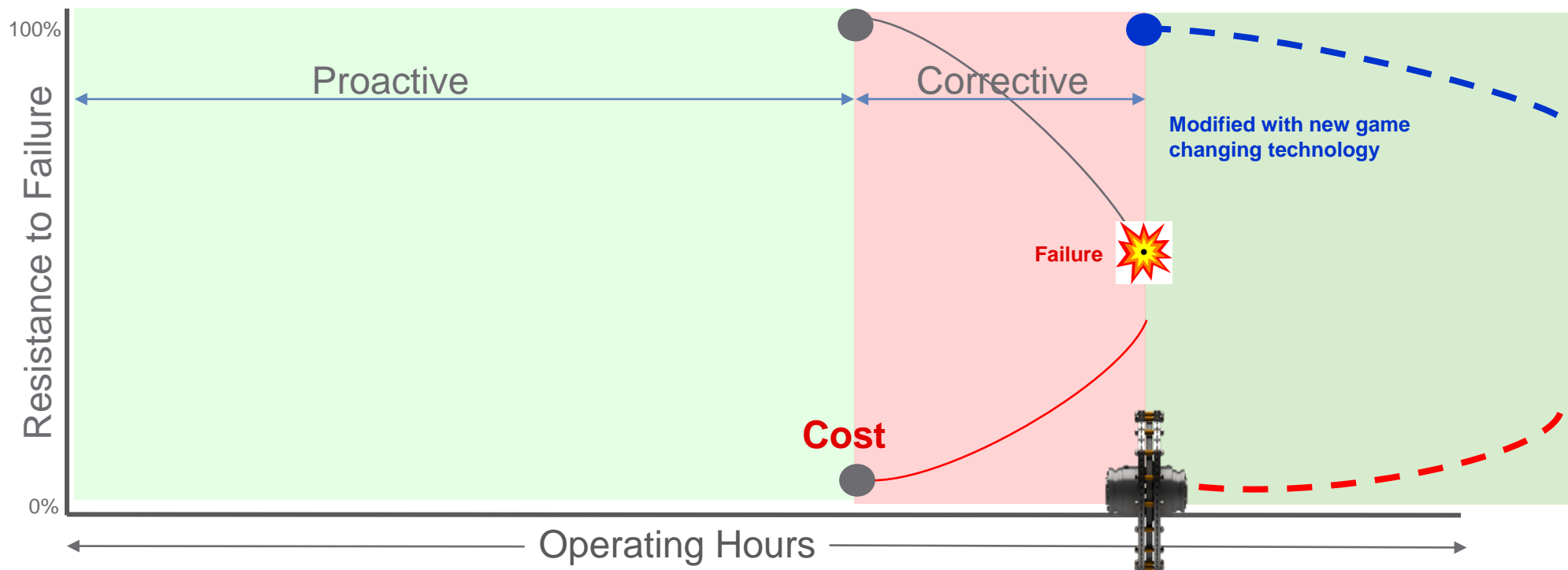


Demo set Magnet Copper principle



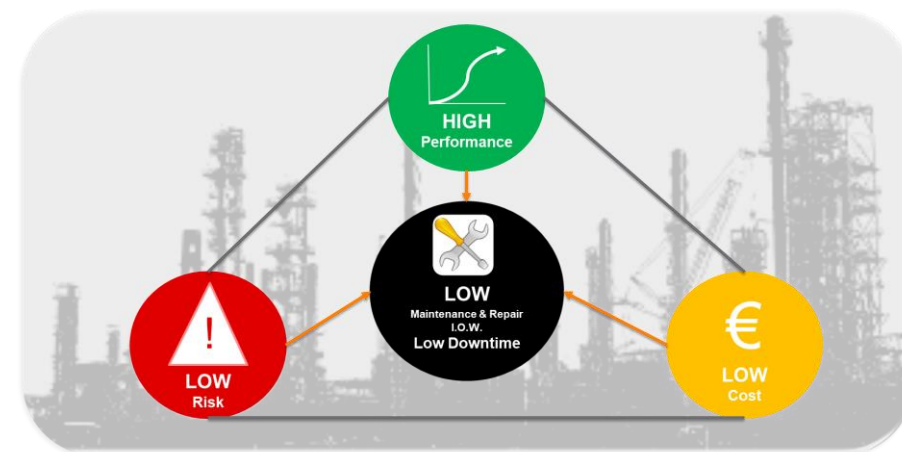
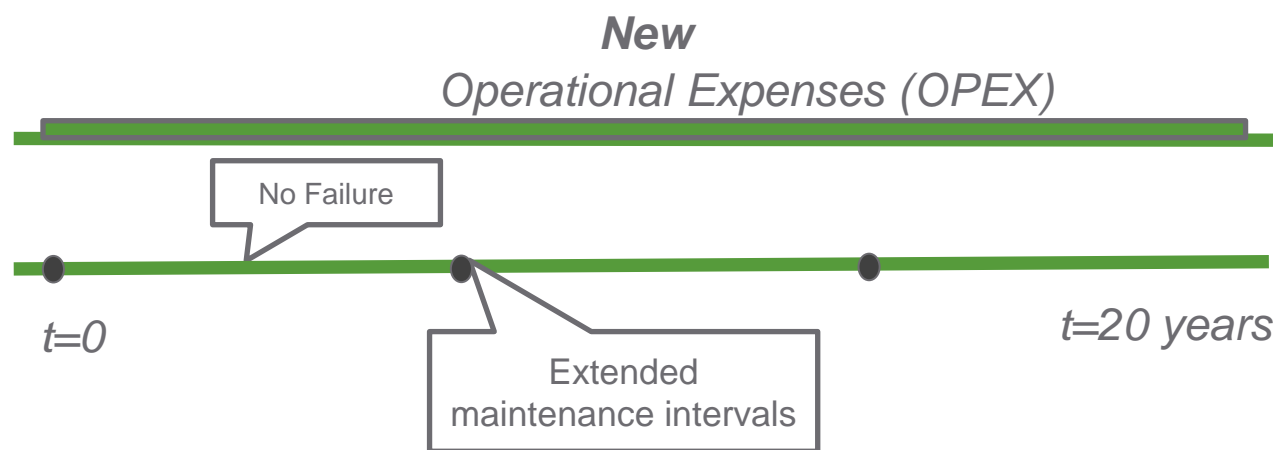
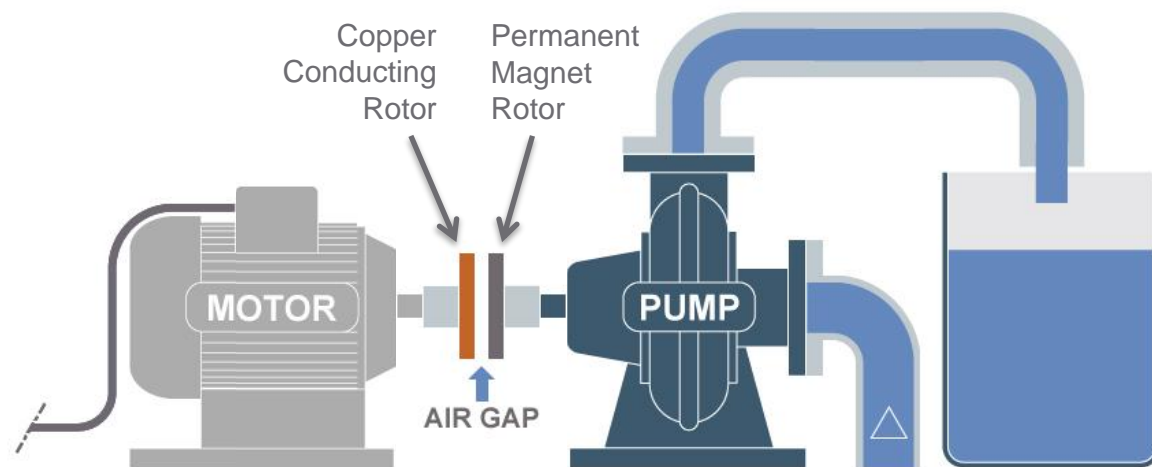
Demo set Ventilator Skid

# Actual resistance to failure





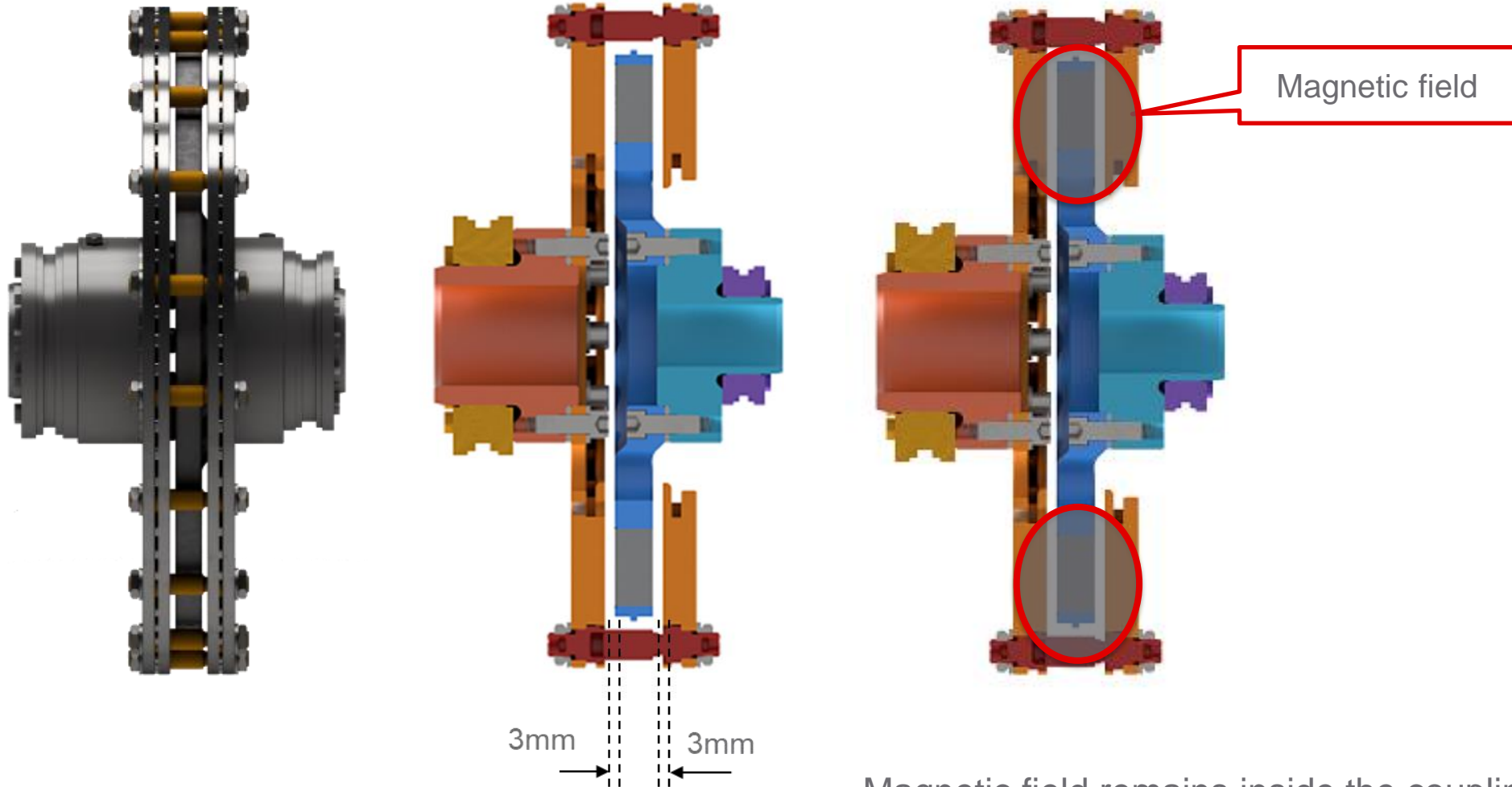
# The Zytec rotating equipment layout





# Principle of the Zytec Coupling

## Magnetic field



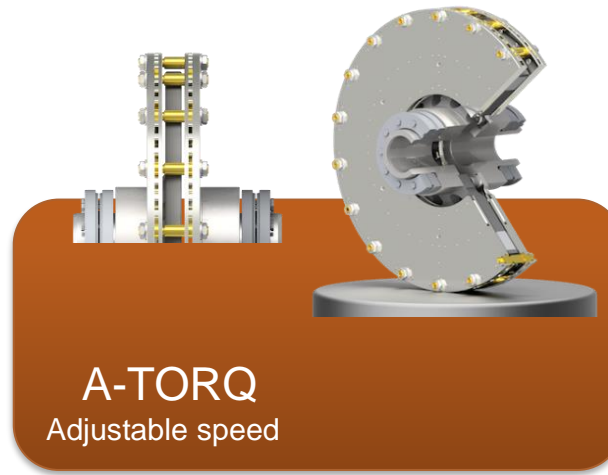
Magnetic field remains inside the coupling similar to an electric motor.

# Product range



**F-TORQ**  
Fixed speed

Fixed Speed Coupling with  
**fixed 3 mm air gap**  
enables transfer ratio of  $1:\approx 1$ .



**A-TORQ**  
Adjustable speed

Adjustable Speed Coupling with  
**adjustable fixed air gap from 3-15 mm**  
enables reduced but fixed transfer  
ratio of  $1:n$ ,  $n=[0, \approx 1]$ .

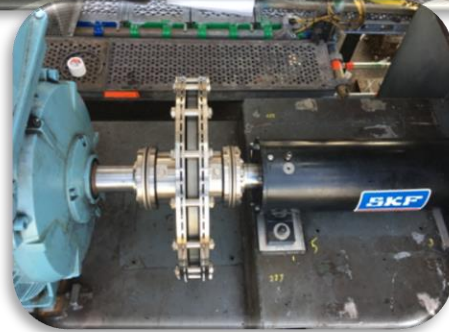


**V-TORQ**  
Variable speed

Variable Speed Coupling with  
**automatically adjustable air gap from 3-25 mm**  
enables variable transfer ratio of  $\approx 1 > n > 0$ .

7.5 kW - 375 kW Standard product range  
> 375 kW Tailor made





Radial & Horizontal Fans



Horizontal & Vertical Pumps



# Applications

Generators & Compressors



Conveyor Belts



Bucket Elevators/  
Shredders/  
Crushers/  
Mixers





*"Today's problems cannot be solved if we still think the way we thought when we created them." (Albert Einstein)*