



SMART  
MARITIME



## EGR / SCRUBBER

PER MAGNE EINANG, SINTEF OCEAN

SERGEY USHAKOV, NTNU

SAC MEETING 20-09-2018

**sfi** = Centre for  
Research-based  
Innovation

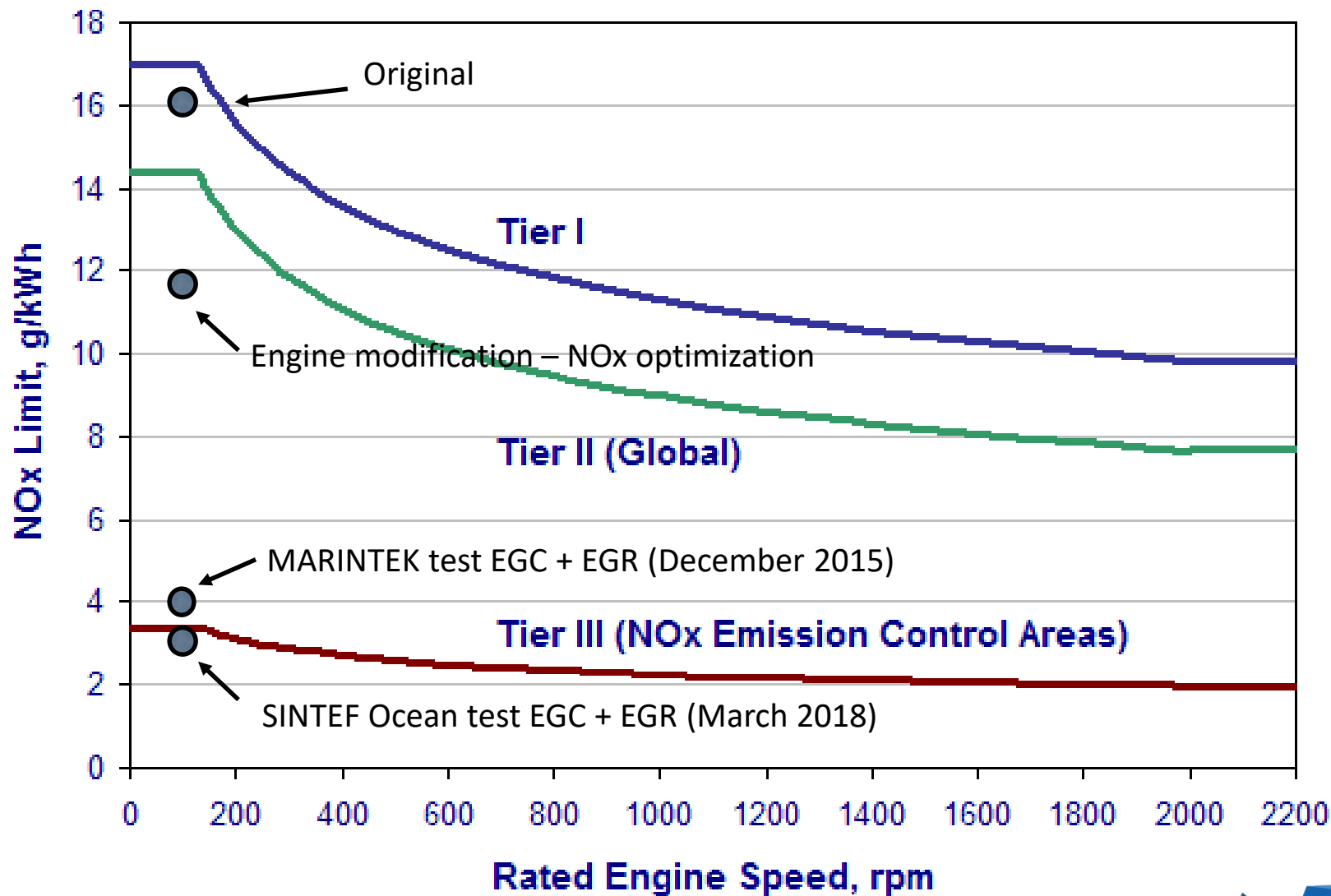
The Research Council of Norway

[www.smartmaritime.no](http://www.smartmaritime.no)

# HFO operation in ECA Exhaust Scrubbing and EGR

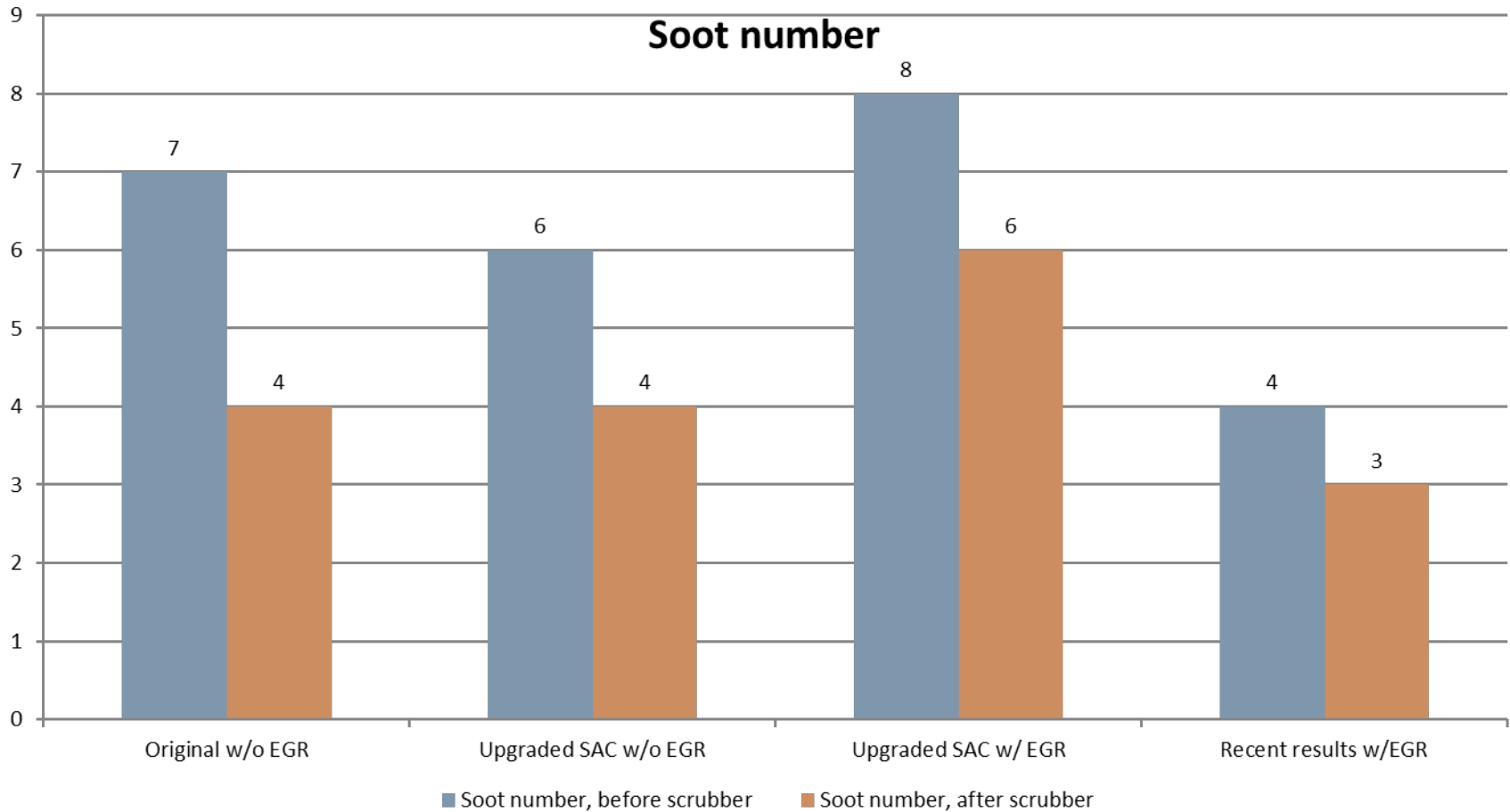
Partners: Solvang, Wärtsilä Moss





# Clipper Harald

## Operating at 60% Load



# Exhaust gas Scrubber open loop- Wash water cleaning

