



*SMAR Azure Ltd*

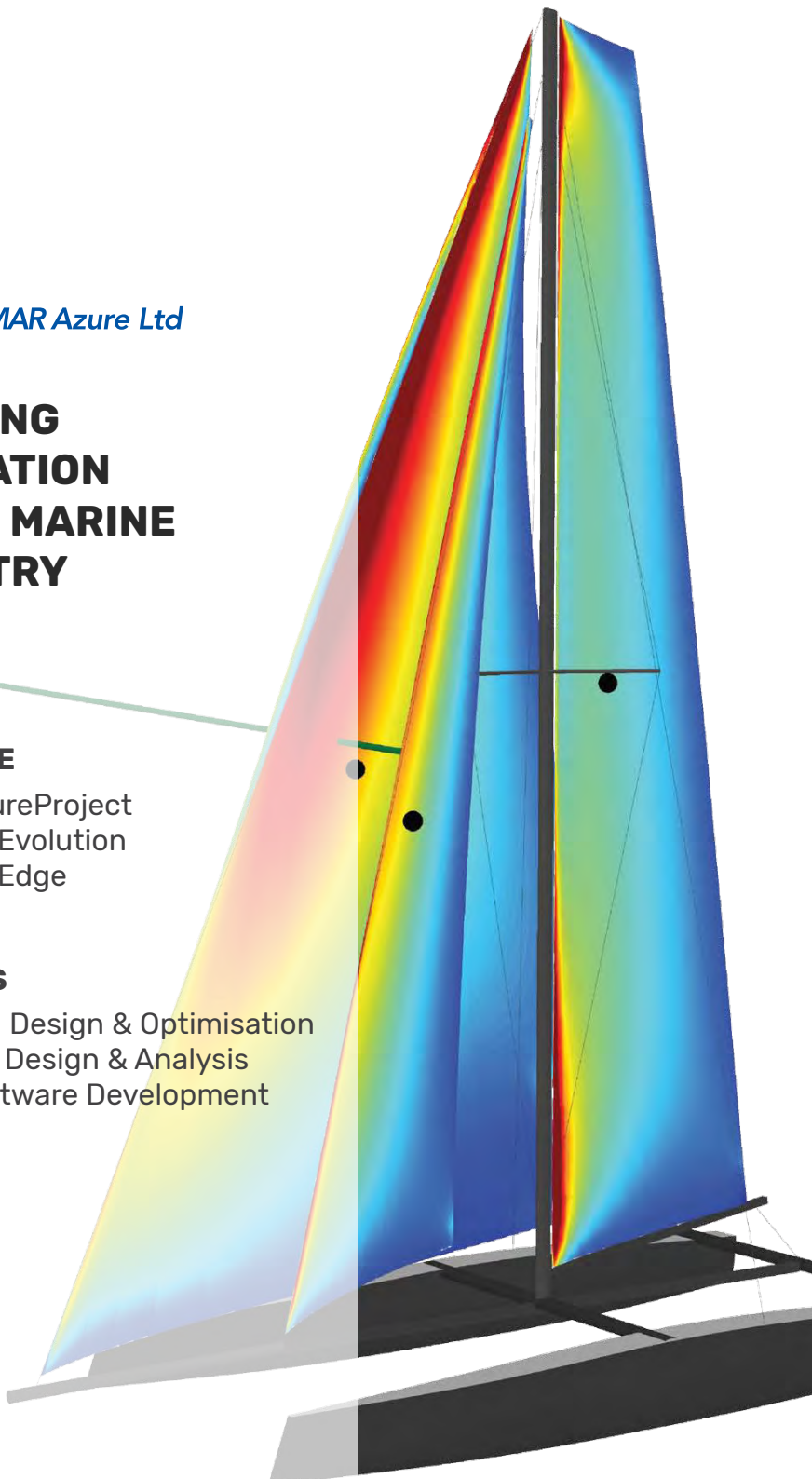
# BRINGING INNOVATION TO THE MARINE INDUSTRY

## SOFTWARE

- ▶ AzureProject
- ▶ SA Evolution
- ▶ RigEdge

## SERVICES

- ▶ Sail Design & Optimisation
- ▶ Rig Design & Analysis
- ▶ Software Development



# Services - Sail Design & Optimisation

SMAR Azure provides expert professional services to help you develop top quality sails. The team is equipped with an advanced toolset as well the necessary know-how required to deliver high-quality services. Some of the tools used include: **sail design and analysis software, Finite Element Methods (FEM)** and **Computational Fluid Dynamics (CFD)**.

## SAIL DESIGN

- » We develop highly accurate and fast sail designs, using AzureProject in-house.
- » Our 3D visualisation tools allow users to accurately preview the exact fit of the sails on the rig.
- » Our highly experienced engineering team brings extensive know-how to the table.
- » Proven performance record – our sail designs have been successfully used in competitions all over the world.

## SAIL SHAPE OPTIMISATION

- » Using AzureProject, our team can:
  - » evaluate the drive and side forces
  - » calculate the flying sail shape
  - » calculate stress distribution
- » Our advanced tools allow us to quickly iterate through design changes, and quickly reach the optimal solution.

## DESIGN AND OPTIMISATION OF FIBRE LAYOUT

- » Our software allows us to evaluate:
  - » the flying sail shape
  - » stress values and directions for each layout
- » Based on the analysis results, our team can optimise the fibre layout. For instance, the team can reinforce highly stressed zones with additional fibres, and ensure that fiber trajectories match the stress directions.

*"The new Rolly Tasker Genoa is now completed and on the way to Caribbean...To a very satisfied customer! Thank you and your team for the strong cooperation and good work!"*

**Sven Cornelius, Rolly Tasker Sails, Thailand**

*"Good news! The F-27 sails that you reviewed last season have been working out great for my client. He just won one of our biggest local sailing events, the Swiftsure race. Thanks again for all your help reviewing my sail designs... it's a team effort!"*

**Eric Taylor, Taylor Sails, USA**

# Services - Rig Design & Analysis

Our services help yacht and rig designers quickly move from concept to final design, cutting prototyping costs, solving management issues, and increasing structure reliability through the use of our advanced structural analysis tools.

## RIG DESIGN

- » We use our proprietary sail design technology to create any type of sailplan.
- » From the baseline sailplan, we can identify the optimal rig and sail plan by simulating variations in sail trim, sailing conditions and sail shape geometric parameters.

## RIG ANALYSIS

- » Using RigEdge, we evaluate the tuning and sailing loads.
- » Once the global strength of running and standing rigging and spars is evaluated, we can further verify the design using advanced FEM / FEA tools.

*"Amazing job from you guys at SMAR Azure Ltd. Special thanks from the owners to Francesco Nasato for the rig design. They never dreamed we can reach such accuracy throughout their custom project."*

**Jean Saintonge - Voiles Saintonge, Canada**

# Services - Software Development

- » SMAR Azure can build flexible and modifiable software solutions that match your specific goals, requirements and activities.
- » We have extensive expertise in building custom solutions of various level of complexity. Our skills range from development of enterprise solutions to performance analysis applications and tridimensional design systems.

# Software

## AzureProject

- » 3D Sail Design
- » Fibre layout
- » Performance optimisation
- » Advanced analysis

## RigEdge

- » Rig and sail geometry
- » Sail loads calculation
- » Rig analysis

## SA Evolution

- » Fibre layout and performance analysis tool

## PRODUCT SERVICES

### TRAINING

- » Introductory and advanced courses led by expert SMAR Azure engineers for all products.

### MAINTENANCE AND SUPPORT

- » Free updates, manuals and technical dispenses, bug fixes.
- » Personal and dedicated technical support via email, phone, Skype & web-based e-Ticket.

## SMAR AZURE LTD

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- » Market leader in design and analytical software for the marine industry.
- » Used by over 200 users in 30 countries.
- » Lloyd's Register and RINA use RigEdge for certifying sailing yacht rigs.
- » Team is formed of highly experienced engineers in sail design, rig design as well as software development.