

# WindSim Accelerator

## Overview

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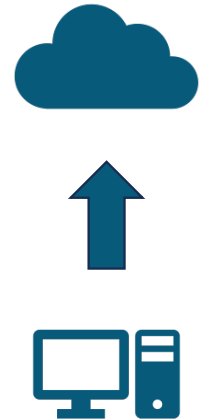
- The case for the cloud
- What is WindSim Accelerator
- SaaS model: Subscription vs. license
- Credits
- Looking forward: Demo new functionality



## The case for the cloud | Trends

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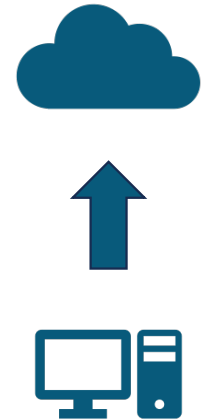
- **Volume** The project pipeline is increasing, larger projects, more parametric studies
- **Speed** Demands on project turnaround time is increasing
- **Accuracy** The need for accuracy remains high, as increasingly complex sites are being assessed, pressure on profitability, reduce uncertainty
- **Security** Data privacy, compliance, and backup
- **Scalability** Increasing need for teamwork with multiple people on different devices from different locations at the same time
- **Access** Make tools more intuitive and easy-to-use across all terrain types
- **User friendliness** Removing obstacles, investment and service needs, and implementing improvements and new functionality much quicker, reducing the need for multiple tools
- **Productivity** More (granular) projects, jobs and sectors can be run simultaneously, time freed up



## The case for the cloud | Outcomes

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- ✓ Better and faster investment decisions
- ✓ Higher, realistic AEP
- ✓ Lower CAPEX
- ✓ Lower OPEX
- ✓ Improved project ROI and Bankability
- ✓ Increased competitiveness

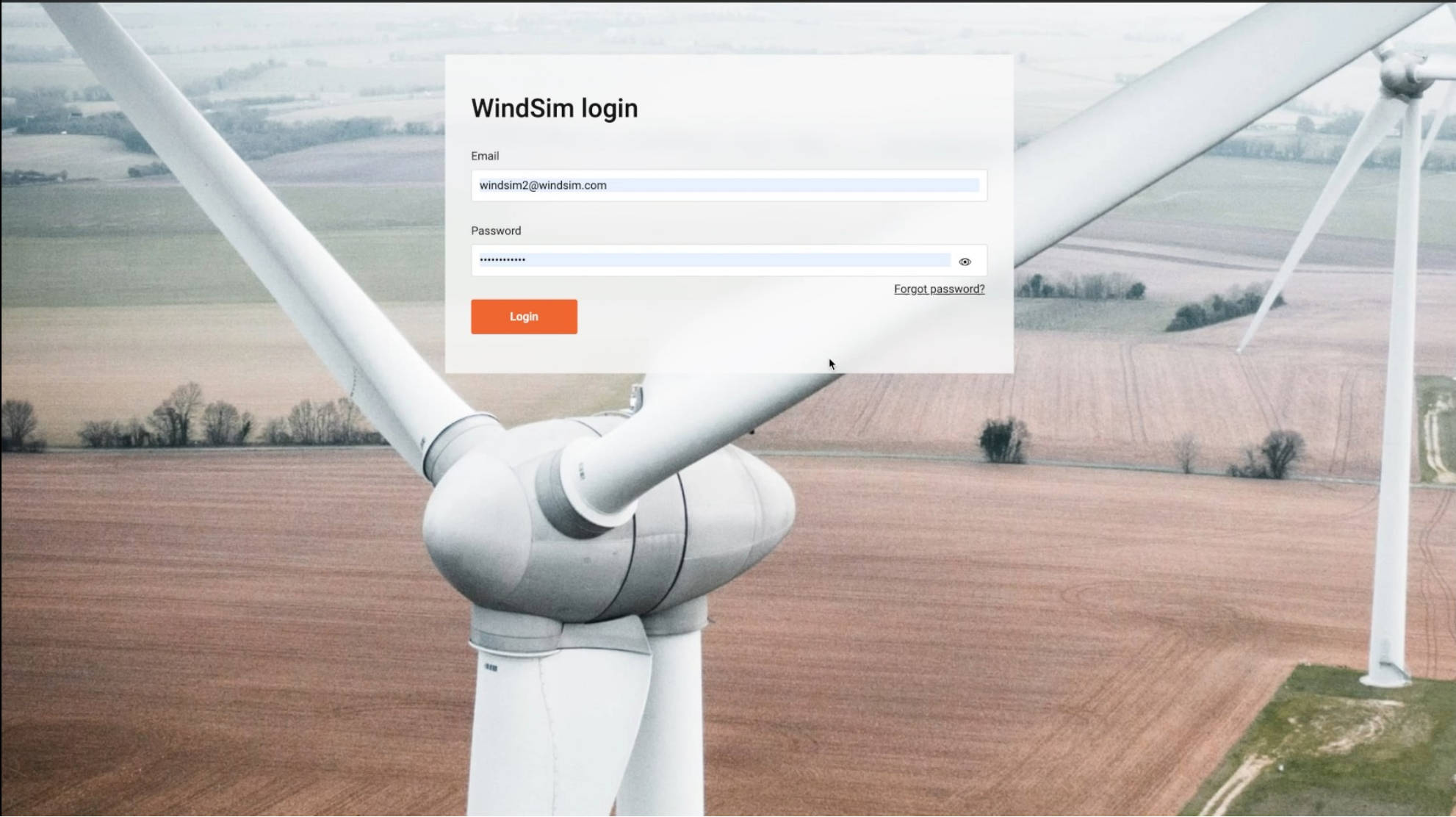


## WindSim login

Email

Password

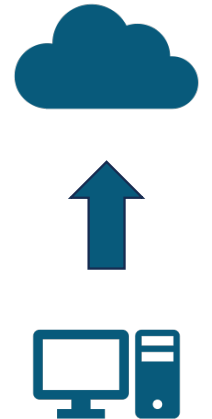
[Forgot password?](#)



## WindSim Accelerator | What it is

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- ✓ A cloud-based platform: Access to multiple servers simultaneously
  - ✓ Ability to run multiple projects and jobs simultaneously
  - ✓ Ability to run more granular projects
  - ✓ 'Unlimited' model size
  - ✓ Reduced project development time
  - ✓ Time freed up and higher productivity
  - ✓ Fully managed services
  - ✓ No local hardware investment or support
  - ✓ Accessibility and scalability (multiple users, devices and locations)
  - ✓ Continuous upgrades/releases
  - ✓ Resilience
  - ✓ Analytics
- ✓ Purpose: expanding access to accuracy, faster results, making CFD easier to use, more accessible
- ✓ Currently housing wind field simulations, in combination with desktop pre- and post-processing
- ✓ More functionality and modules to follow, to eliminate the need for desktop software
- ✓ SaaS-based subscription model



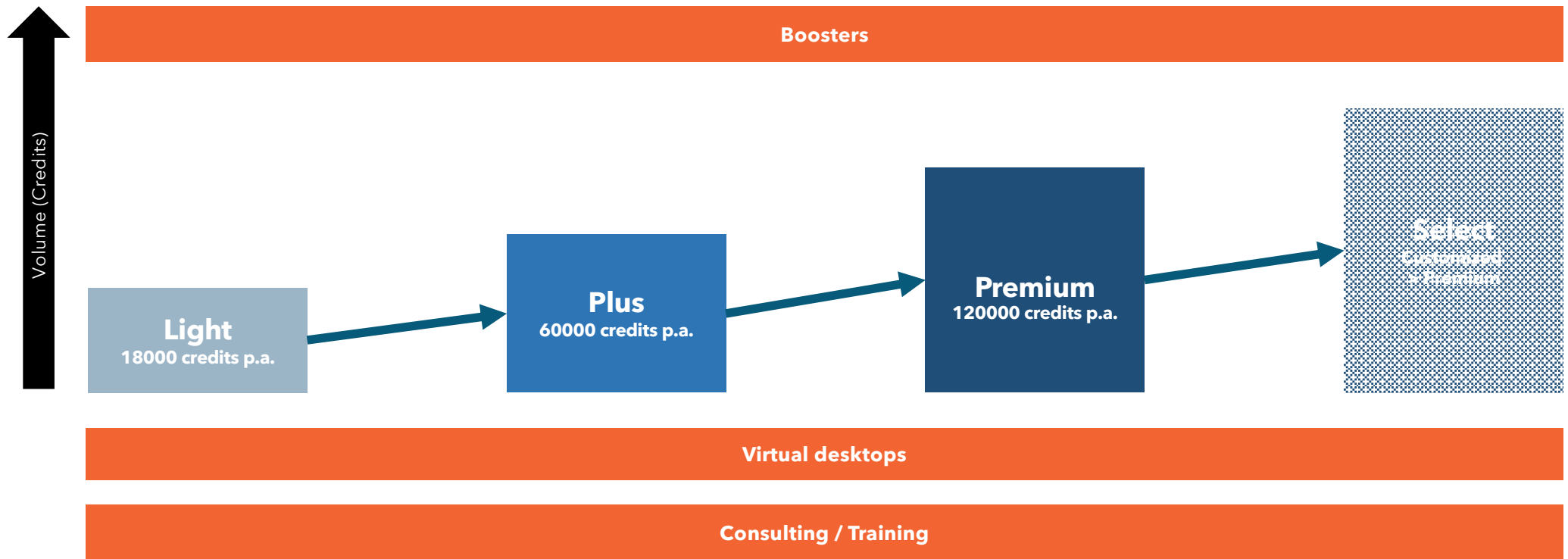
## SaaS model | Subscription vs license

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- Objectives
  - Simple model
  - Flexibility
  - Reflect typical user needs and usage patterns
- Lower overall costs (Total Cost of Operation/Ownership)
  - No need for initial investment
  - Eliminated: annual support and maintenance, local hardware investment, local support, electricity costs
- Available as monthly, yearly or 3-yearly subscription
- Volume-based with different plans



# WindSim Accelerator | Volume-based subscription plans





## WindSim Accelerator | Credits

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How many credits (indicative)?

*Example 1*

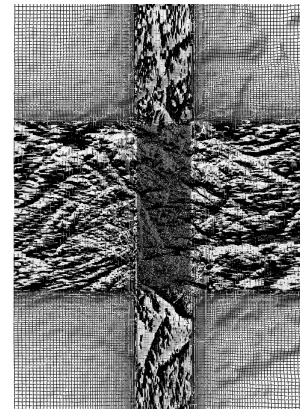
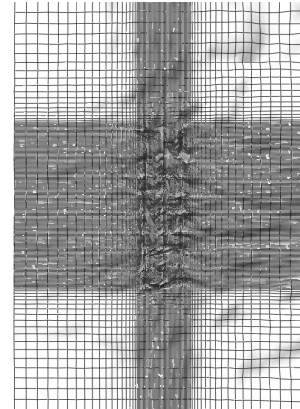
5M cells, 1 run, 12 sectors, low complexity  
Approximately 100 credits

*Example 2*

10M cells, 1 run, 12 sectors, medium complexity  
Approximately 1000 credits

*Example 3*

30M cells, 2 runs, 16 sectors, high complexity  
Approximately 30.000 credits



## WindSim Accelerator | Credits

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- Credits are a reflection of value delivered, driven by:
  - Model size
  - Terrain complexity
  - Max iterations
  - Sectors
  - Convergence criteria
  - Solver selection
  - Accuracy
  - Stability

**Tip: Credit consumption**

- Trial & familiarization
- Analyze your usage pattern
- Review projects and used credits

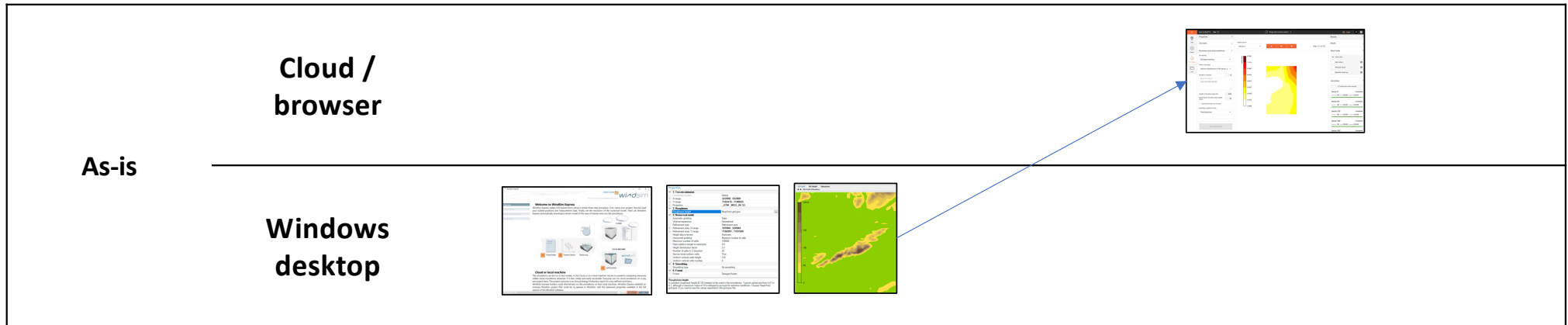


- Simple projects draw very few credits whereas the more complex ones will require more
- Coming soon: Preview of estimated time and credit consumption prior to starting simulation

# Cloud beta | What we will show you

Pre processing

Windfields



## Cloud | Demo

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- Live plots ([x.windsim.com](https://x.windsim.com))
- Map (<https://app-windsim-web-ui-dev-dominik.azurewebsites.net/>)

Wind Fields Properties

Boundary and initial conditions

Do nesting  
Disregard nesting

Sector input type  
Manually set sector angles

Sectors for next run \*  
4

Height of boundary layer [m] 500  
Speed above boundary layer height [m/s] 10

Use the previous run as input

Boundary condition at top  
Diffusive link (moving fixed pressure)

Physical models

Calculation parameters

Convergence settings  
Manual definition

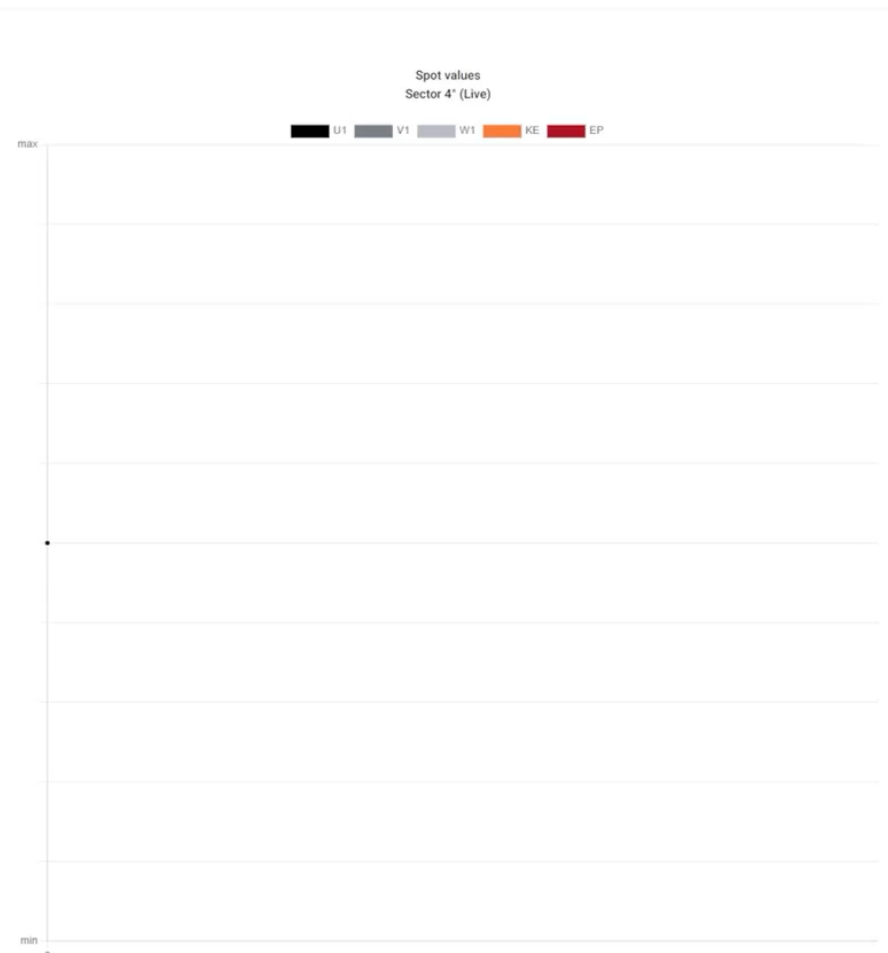
Numbers of iterations 100  
Convergence criteria 0.005

Convergence monitoring

Output

Run Wind Fields

Select sector  
Sector 4



Results

Terrain  
Project size in cells [M] 0.1

Wind Fields  
 Spot values  
 Residual values

Job status

Refresh jobs status manually  
Stop all Cancel all  
Sector 4\*  
Iteration 0 Est. 0:00:00 Elapsed 0:00:00

Status  
Simulations are running...  
Download project

windsim dev ① Evaluation-2023-05-24T122044 Logs ON

Properties

Map

Dev tools

Model: ex. Handhammerfjellet

Wind Fields: Center map, Reset map, Lock area

Files

Coordinates

Model area

Layers

A world map interface with a color gradient overlay. The map shows continents labeled: NORTH AMERICA, SOUTH AMERICA, AFRICA, EUROPE, ASIA, AUSTRALIA, and ANTARCTICA. Oceans are labeled: Arctic Ocean, North Atlantic Ocean, South Atlantic Ocean, Indian Ocean, and Southern Ocean. A red outline on the African continent indicates the 'Model area'. The interface includes a sidebar with navigation options and a top bar with application name and status.

Extract terrain

Powered by Esri

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