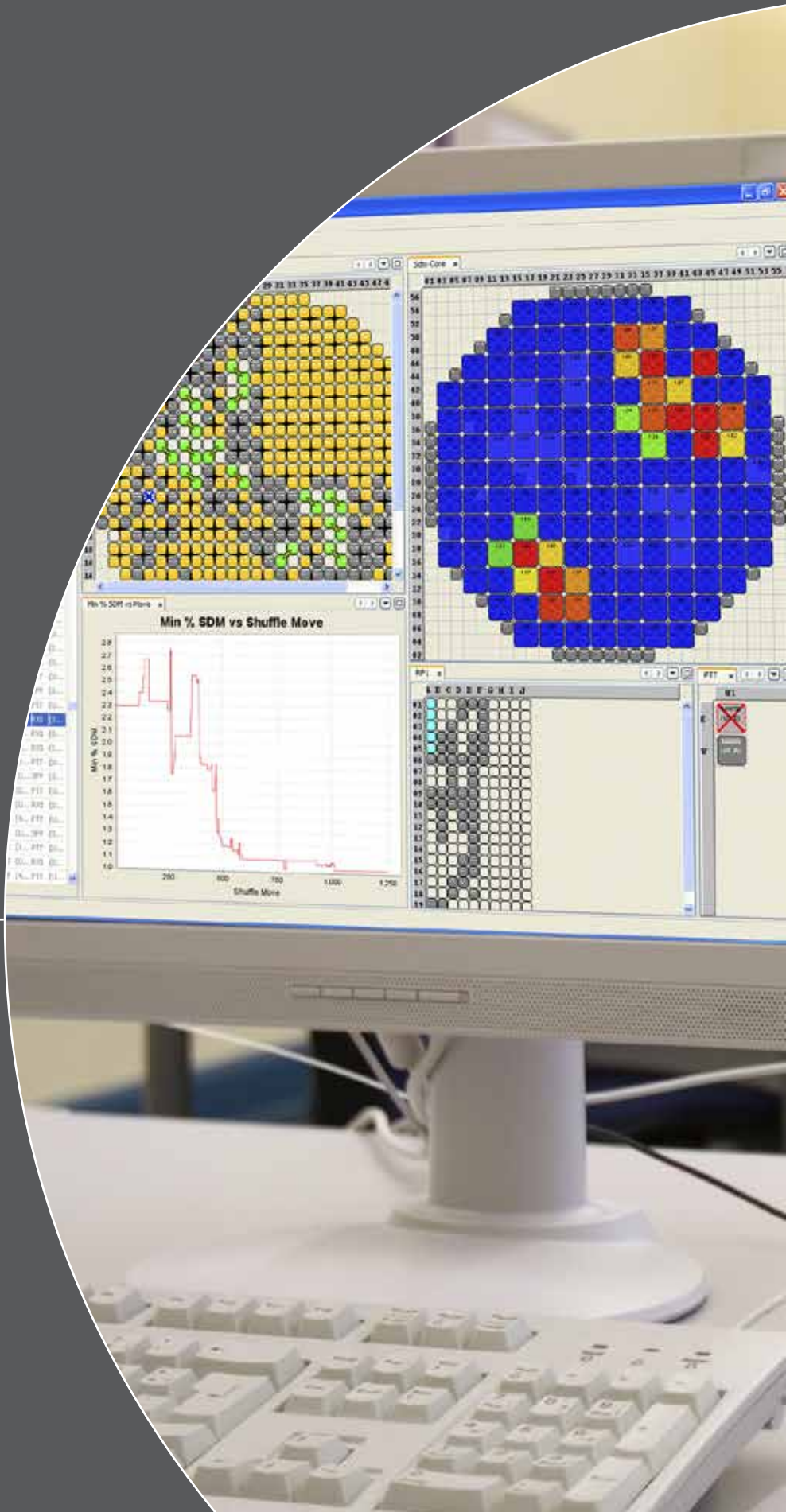


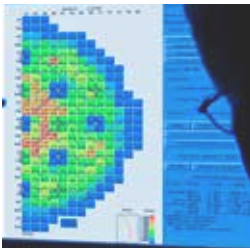
# Studsvik

## Nuclear Fuel Analysis Software



# Nuclear Reactor Analysis Software and Services

Studsvik is the global leader in the development and support of fuel vendor-independent reactor analysis software. We offer a full suite of licensing-grade software and engineering services to support operating utilities, fuel vendors, safety authorities, and research organizations. Our products are used throughout the world for light water reactor core design, analysis, and operational support.



## Our Product Line

For over 30 years, Studsvik has provided the commercial nuclear power industry with cutting-edge solutions to address emerging issues and industry initiatives.

Unparalleled in the industry, the Studsvik product line offers a full lifecycle solution, meeting all your core analysis requirements:

- Fuel and Loading Pattern Design & Optimization
- Reactivity Management & Core Tracking
- Transient Core Analysis
- Fuel Performance Analysis
- Operational Support
- On-line Core Monitoring
- Cycle-Specific Training Simulator Models
- Fuel Pool Criticality
- Back-End (Storage and Cask) Analysis

Studsvik offers advanced reactivity management and operational support solutions with state-of-the-art physics models and automated engineering functions. Our products allow organizations to maximize engineering resources without sacrificing accuracy.



## The Global Leader

Our licensing-grade software allows our customer to perform their own confirmatory fuel cycle analyses, independent of the fuel vendor. Currently over 70 organizations are using our products.

Together, we have performed analyses of every commercially available light water reactor fuel design over thousands of combined reactor operating cycles.

Our fuel vendor independence allows our customers the freedom to change fuel vendors or to benefit from potential cost advantages of mixed-vendor solutions, without having to retrain their engineers.

Relying on robust, first-principle physics modeling, advanced numerical techniques, and first-of-a-kind engineering features, Studsvik has created the most popular reactor analysis software in the world.



## Cloud computing

We now offer many of our software products as "hosted solutions."

Studsvik provides secure connections to our centrally hosted fuel analysis software, removing the IT burden of maintaining, supporting, and managing the software.

**In-Core Fuel Management**

Studsвик sets the industry standard for in-core fuel management software with unparalleled accuracy, production-level run times, and easy-to-use input.

**CASMO5**

State-of-the-Art Lattice Physics

**SIMULATE**

3D, Steady-State Nodal Simulator

**SIMULATE3-K**

3D Transient and Safety Analysis

**ENIGMA**

Thermomechanical Fuel Performance Analysis

**XIMAGE**

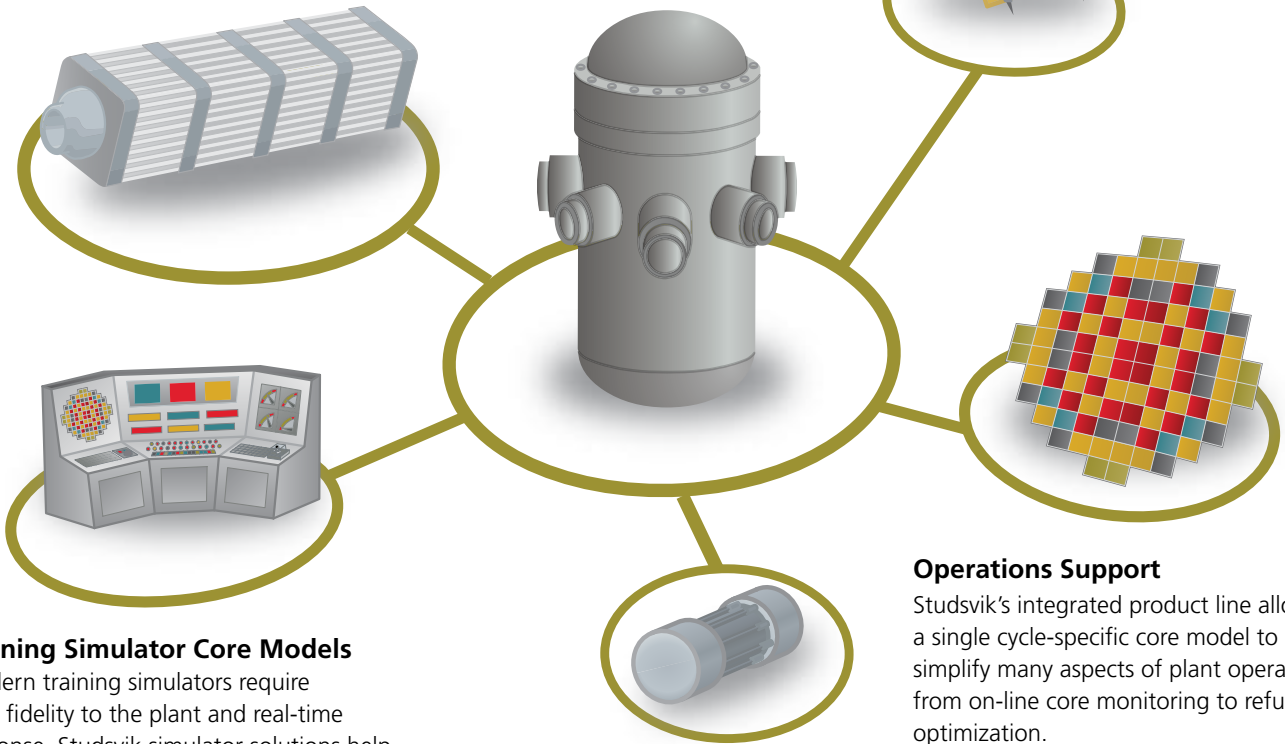
Automated Loading Pattern Design

**"Studsвик has created the most popular reactor analysis software in the world."**

**Engineering Services**

With hundreds of years of combined experience in reactor analysis, Studsvik's engineers can help organizations with a wide range of core analysis services, including:

- Core Reload Design and Verification
- Independent Fuel Bid Evaluation
- Refueling Shuffle Optimization
- Safety Analysis
- Design Certification



**Training Simulator Core Models**

Modern training simulators require high fidelity to the plant and real-time response. Studsvik simulator solutions help organizations meet these requirements by providing cycle-specific core models that can be added to most existing plant simulator installations.

**S3R**

Cycle-Specific Simulator Core Model

**Spent Fuel Analysis**

Managing spent nuclear fuel demands an increasing amount of engineering resources. We offer advanced, integrated solutions to analyze fuel pools / racks and optimize the loading of fuel storage casks.

**SNF**

3D Spent Nuclear Fuel Analysis

**CASKLOAD**

Cask Loading Optimization

**Operations Support**

Studsвик's integrated product line allows a single cycle-specific core model to simplify many aspects of plant operations, from on-line core monitoring to refueling optimization.

**GARDEL**

Advanced On-line Core Monitoring and Automated Reactivity Management

**MARLA**

BWR Refueling Optimization

# The Global Leader in Nuclear Reactor Analysis

Studsvik software is used throughout the world for in-core fuel management, core monitoring, transient analysis, simulator training for reactor operators, fuel pool criticality, and back-end analysis.

We also offer a full range of engineering services to complement our integrated suite of core analysis products.

As the only provider of fuel vendor-independent nuclear analysis tools covering the entire fuel lifecycle, Studsvik can help nuclear organizations maximize engineering resources and lower operating costs.

Studsvik software is written to function seamlessly across heterogeneous computing networks.

Our products are available for Windows, Linux, and a variety of UNIX-based platforms. Many of our software products are 64-bit optimized with full backwards compatibility for 32-bit hardware.

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