



SU-3400 Single Wafer Processor

The Evolution of the World's No.1 Cleaning Equipment

November 14-17, 2023

SCREEN Semiconductor Solutions Co., Ltd.



80th
Anniversary



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Cutting-edge Devices

Wafer size
300
mm



NEW

SU-3400
Single Wafer Cleaner



SU-3300
Single Wafer Cleaner



SU-3200
Single Wafer Cleaner



SS-3300S
Spin Scrubber



SB-3300
Backside Cleaning System



FC-3100
Wet Station



DT-3000
Coat/Develop Track



LA-3100
Flash Lamp Annealer



SS-80EX
Spin Scrubber



VM-2500/3500
Measurement System



NEW

RF-300EX
Coat/Develop Track



NEW

RF-200EX
Coat/Develop Track



SP-2100
Spin Processor



CW-2000
Compact Wet Station



RE-3500
Measurement System



ZI-3600
Inspection System

SCREEN

3
nm~

5
nm

7
nm

14
nm

28
nm

45
nm

90
nm

130
nm

~250
nm

IoT Applications

Wafer size
200
mm

Wafer size
300
mm

Targeting advanced electronic devices

Single Wafer Cleaner SU-3400

NEW

Debut 2022.12

The Evolution of the World's No. 1* Cleaning Equipment

* Based on SCREEN in-house research

MAX
24

24 chamber
configuration

6×4
LEVEL TOWER

6 level, 4 tower
construction



Single chamber servicing

AQUASPIN

Productivity + Capability

- Throughput of up to 1,200 wph
- Footprint reduced by 30%

Sustainability

- Reduction of environmental load
(Exhaust/Nitrogen/Chemical)

Stability

- Stable operation using Big Data and
malfunction prevention through camera
surveillance



Throughput of up to 1,200 wph



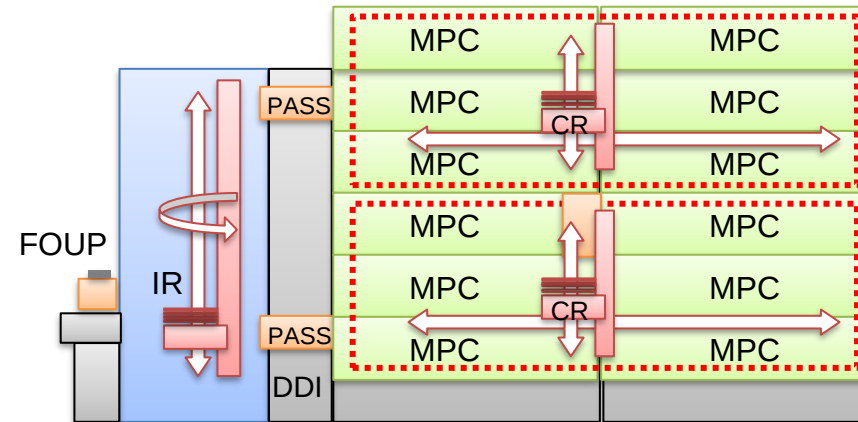
◆ *High throughput wafer transfer robot and unique chamber layout*

- Superior cleaning and processing capacity approaching that of batch-type cleaner equipment. By improving the configuration and layout of the wafer transport robots and the wafer processing chambers, we have achieved a processing capacity of 1,200 wafers per hour, leading the world in the field of single-wafer cleaning equipment.



SU-3400

(24 ch. = 6 levels x 4 towers)



Footprint reduced by 30%



◆ Small footprint

- Achieved a 30% footprint reduction by downsizing the 24 cleaning processing chambers of the SU-3300 and upgrading to a six-tiered tower structure.

Footprint reduced by 30%

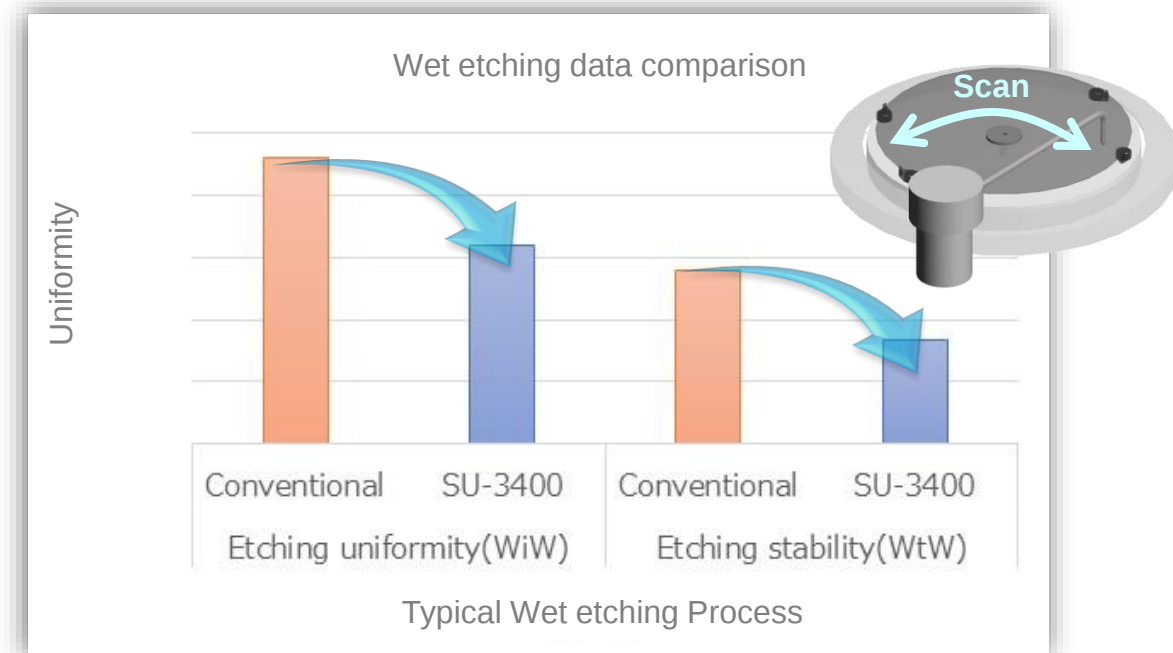
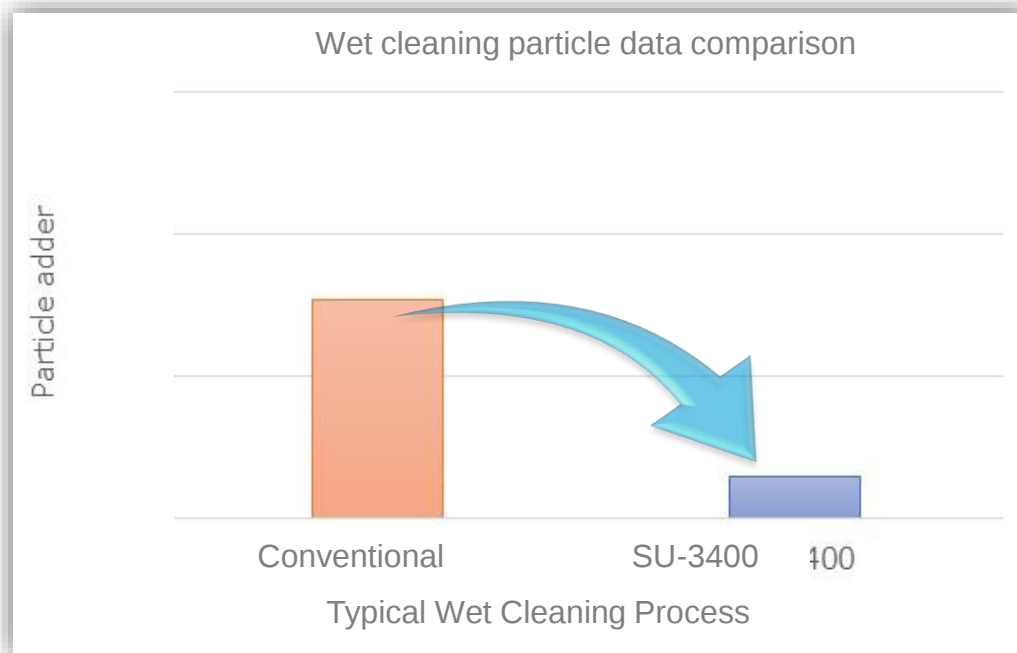
Tool	Single Wafer Clean		
	SU-3200 (12 ch. x 2 =24 ch.)	SU-3300 (24 ch.)	SU-3400 (24 ch.)
Layout			

Capability



◆ Particle and Etching performance improvement

- Improvements to the cleaning nozzles and use of a highly efficient chemical circulation system have substantially reduced the amount of chemicals needed.
- Also, this system shows the highly reliable etching performance with new Nozzle scan function adapted.

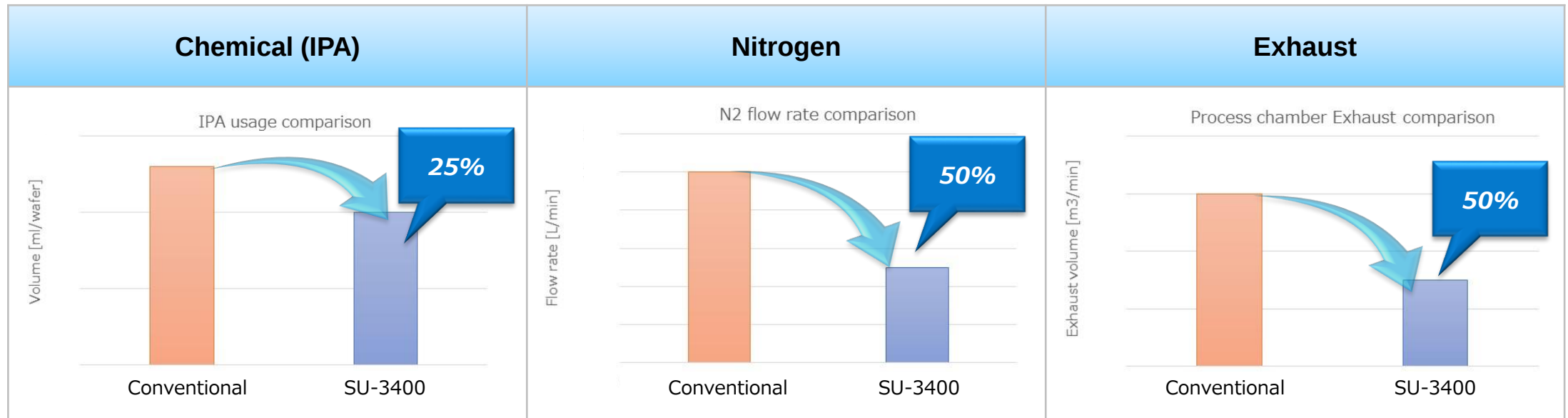


Reduction of environmental load



◆ Exhaust/Nitrogen/Chemical reduction

- The semiconductor manufacturing industry is faced with the challenge of reducing the environmental impact created by its manufacturing processes.
- The equipment's environmental impact has been reduced by >20% by minimizing exhaust amount by fully automating the airflow and significantly reducing chemical use by improving the cleaning nozzle and chemical circulation system.

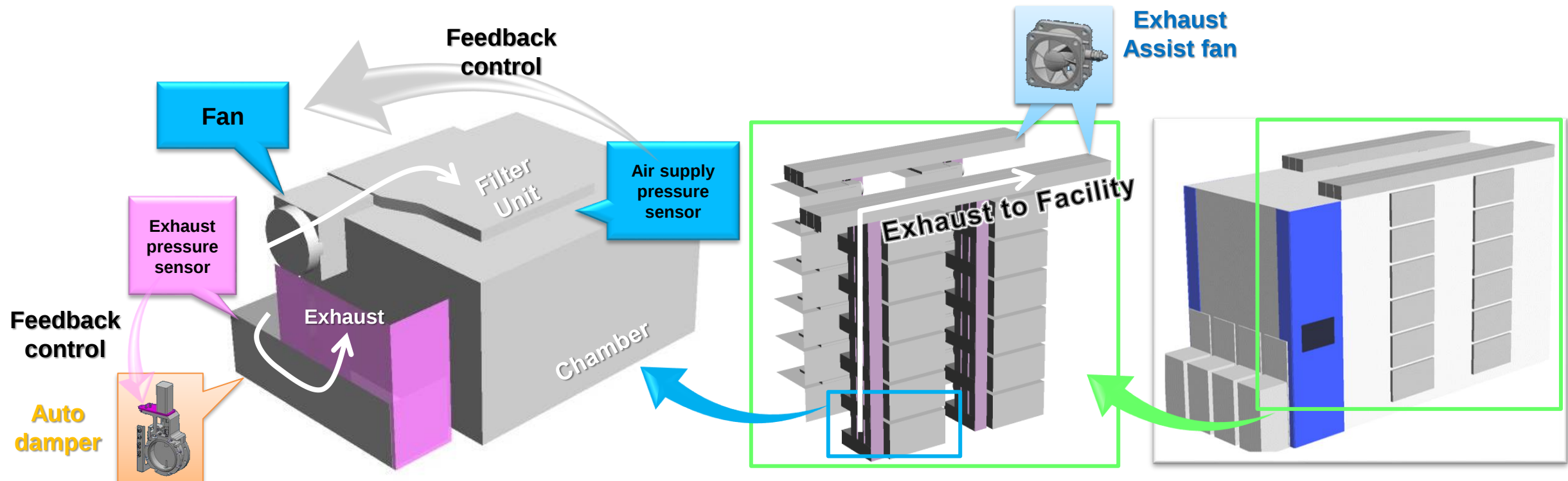


Reduction of environmental load



◆ Auto airflow feedback control system

- The adoption of fully automated airflow control has significantly lowered the volume of air discharge.

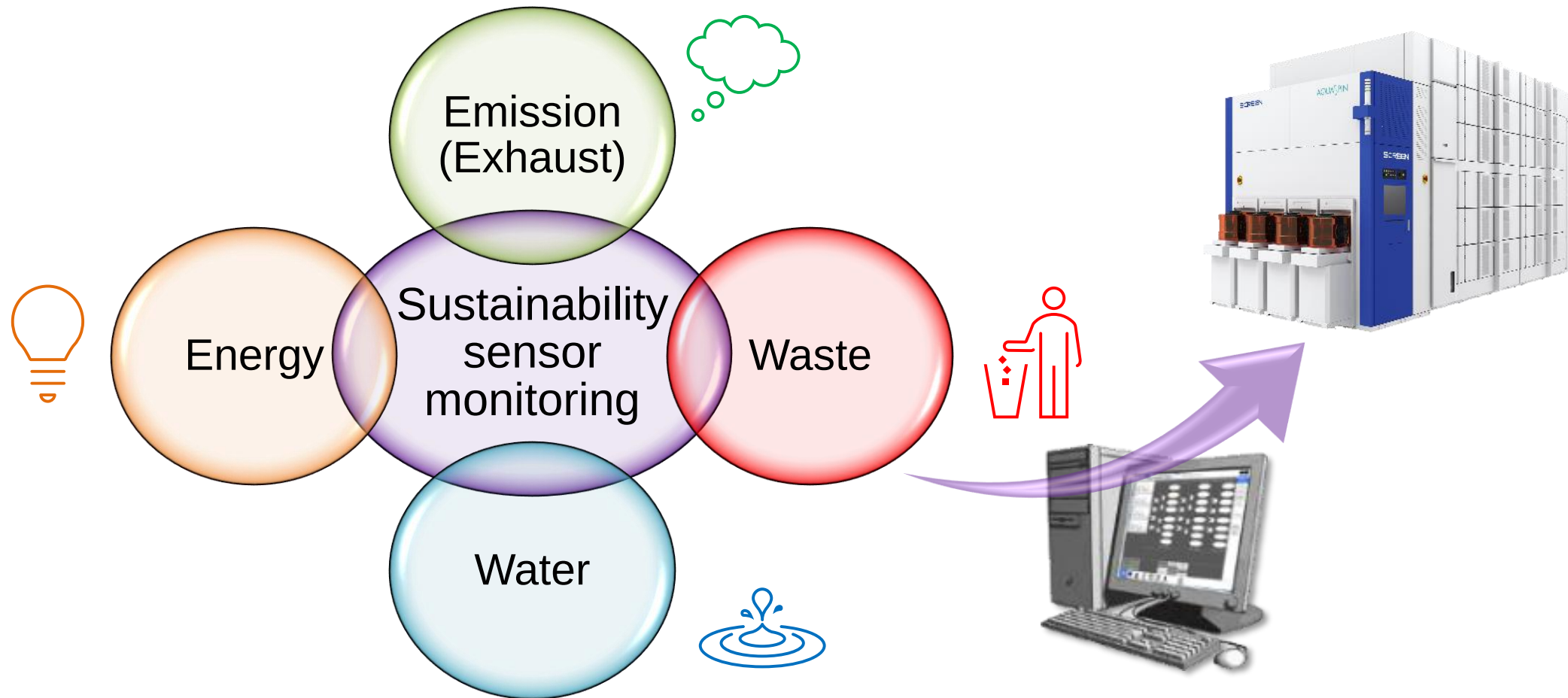


Reduction of environmental load



◆ **Sustainability sensor monitoring**

- SCREEN SPE estimates these upgrades have reduced the SU-3400's environmental impact during operation by as much as 20%.

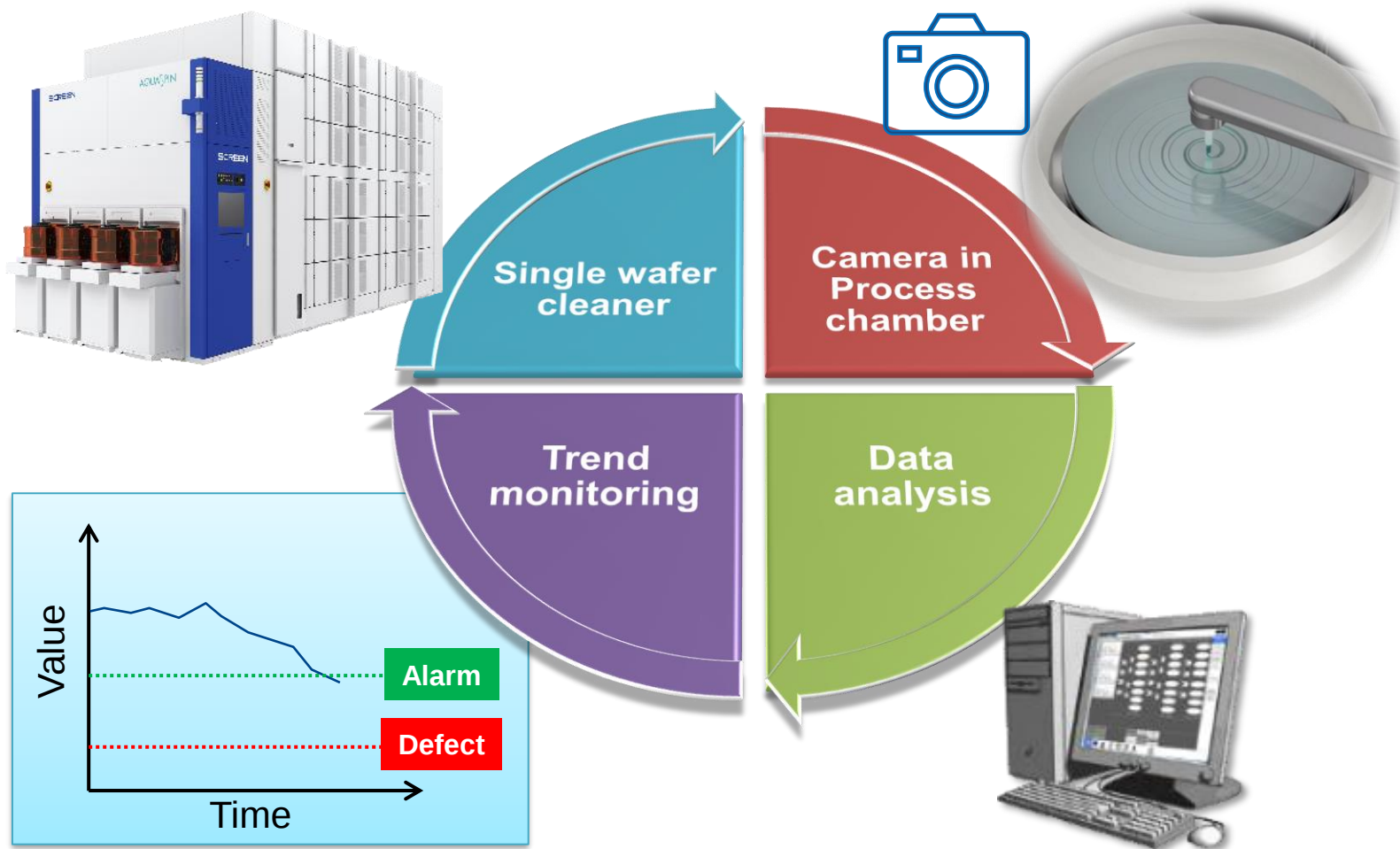


Stable operation



◆ *Big Data and malfunction prevention through camera surveillance*

- High-resolution chamber camera monitoring is available, as well as a full range of support and maintenance functions, such as malfunction detection using IoT and big data.



Single Wafer Cleaner SU-3400



- ◆ SCREEN SPE has once again demonstrated its commitment to meeting the diverse needs of semiconductor manufacturers.
- ◆ As a leading producer of cleaning systems, it is tightly focused on ensuring the continuing growth of the industry.

CLEANING SYSTEM

THE EVOLUTION OF
THE WORLD'S NO. 1^{*1} CLEANING EQUIPMENT

さらなる進化をとげる、世界シェアNo.1^{*1}洗浄装置

NEW
Single Wafer Cleaner
枚葉式洗浄装置
SU-3400 AQUASPIN

FEATURES

- ▶ Throughput of up to 1,200 wph
最大毎時1,200枚のスループット
- ▶ Footprint reduced by 30%^{*2}
フットプリント30%削減^{*2}
- ▶ Improved processing performance
プロセス性能の向上
- ▶ Reduction of environmental load:
Exhaust/Nitrogen/Chemical
環境負荷(排気/窒素/薬液)の低減
- ▶ Reliable operation backed by Big Data
ビッグデータを活用した安定稼働
- ▶ Problem prevention through camera surveillance
カメラ監視によるトラブル防止

*1 Based on SCREEN in-house research
※1 自社調べ
*2 Compared to SU-3300
※2 SU-3300との比較

Wafer size **300 mm**

ADVANCING
TECH & INNOVATION

SCREEN Semiconductor Solutions Co., Ltd.

Innovation for a Sustainable World

SCREEN