



think simulation

getting the chemistry right

Why make OLI your strategy

For upstream applications

January 2019

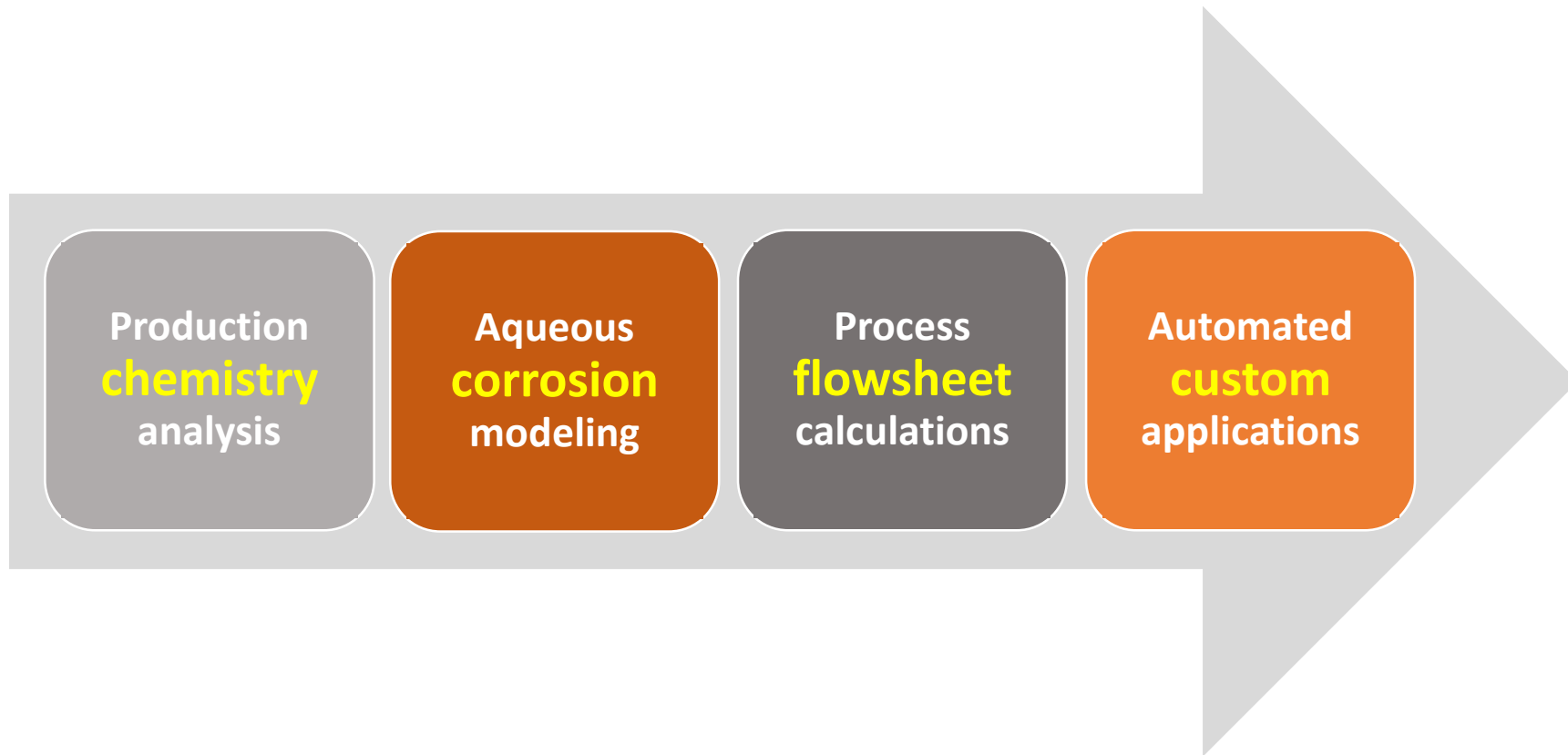
OLI Systems

*Global thought leaders
In water chemistry*

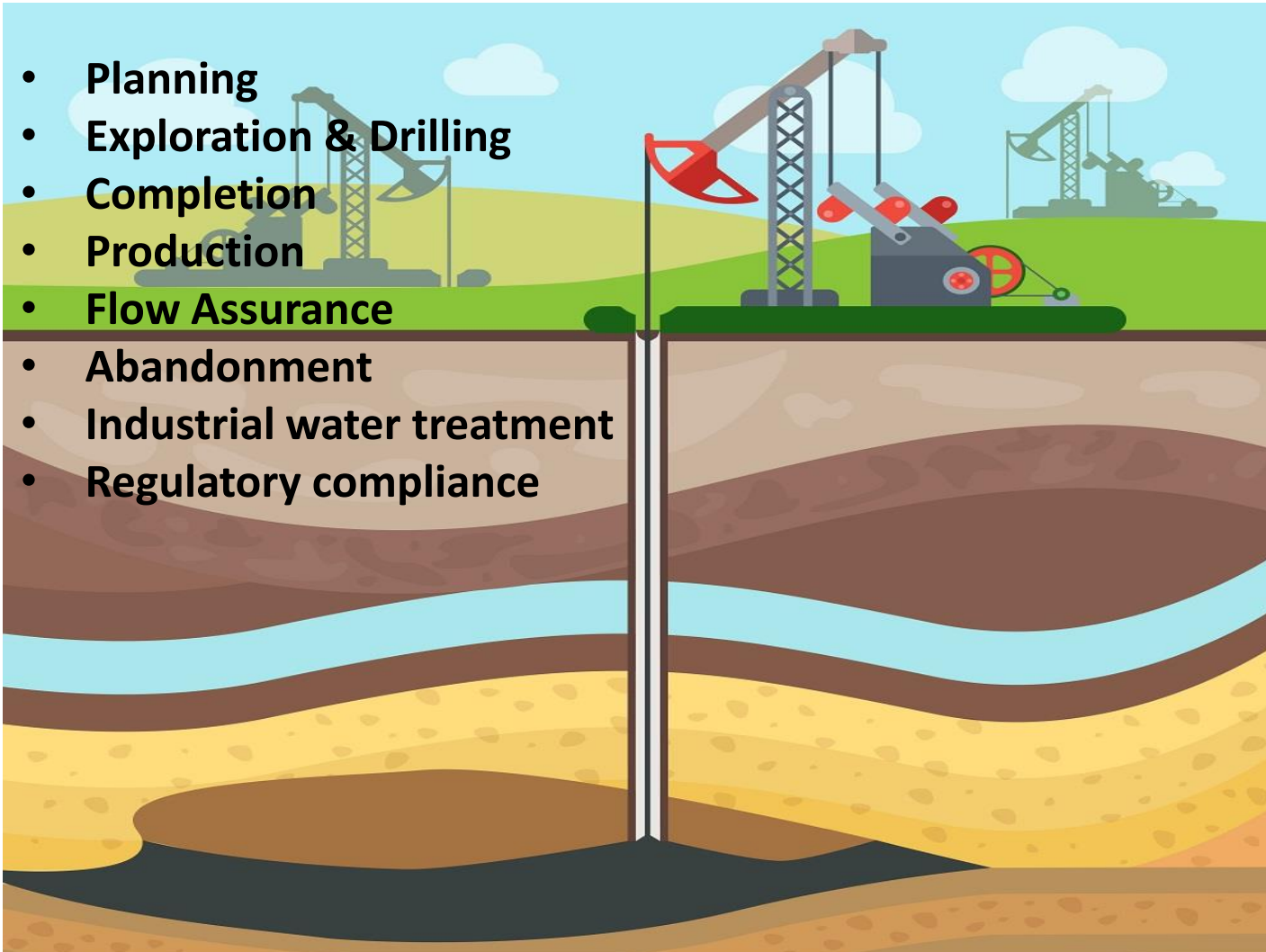
- ✓ Simulation software for scaling & corrosion
- ✓ 47 years specializing in electrolyte science
- ✓ Simulation for all areas of oil & gas
- ✓ Used by the majority of top oil & gas companies

Offshore worker gazing at
a drilling platform in the China Sea

OLI technology brings competitive edge



Focusing on upstream oil & gas

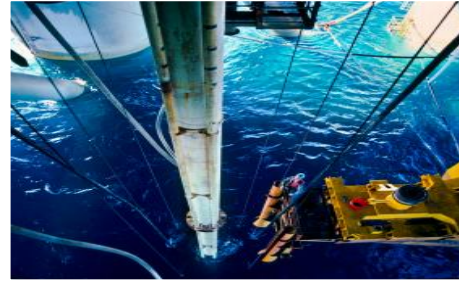


Simulations

- Mineral scale prediction
- Well profile scaling scenarios
- Reservoir mixing
- Injection water compatibility
- Gas lift
- Facilities modeling
- MEG, MeOH regeneration
- Water treatment processes
- Discharge limits
- Screening alloys
- Design of experiments for corrosion testing using autoclaves

MSE SRK specially designed for upstream

Extreme reservoir conditions require special methods



The power of MSE with the sturdiness of SRK

From 8 standard scales: carbonates sulfates halites

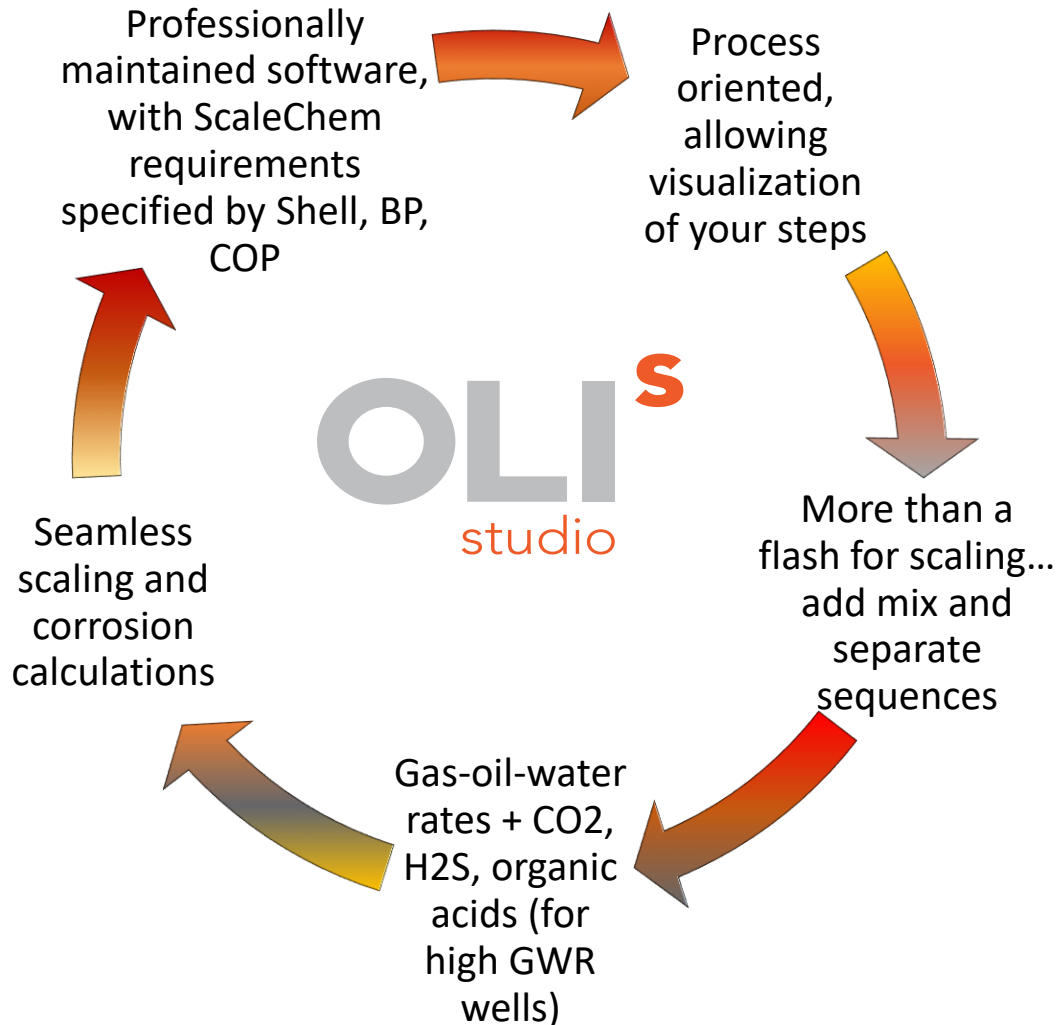
To the entire range of OLI chemistry



Use MSE-SRK in contour plots, all of ScaleChem options

...and in OLI Flowsheet: ESP too!

Why OLI Studio for upstream scaling / corrosion



Upstream corrosion simulation benefits

OLI Studio: Corrosion Analyzer

Understand your corrosion environment

Gain insights

- Understand corrosion mechanisms in key environments such as CO₂, H₂S, acids, bases, brines
- Predict the susceptibility of metals to both general and localized corrosion in complex environments

Screen materials and environments

- Switch between alloys that include many Corrosion Resistant Alloys (CRAs) including nickel-base alloys and stainless steels as well as carbon steel, Cu, Ni, and Cu-Ni alloys
- Investigate material – environment compatibility

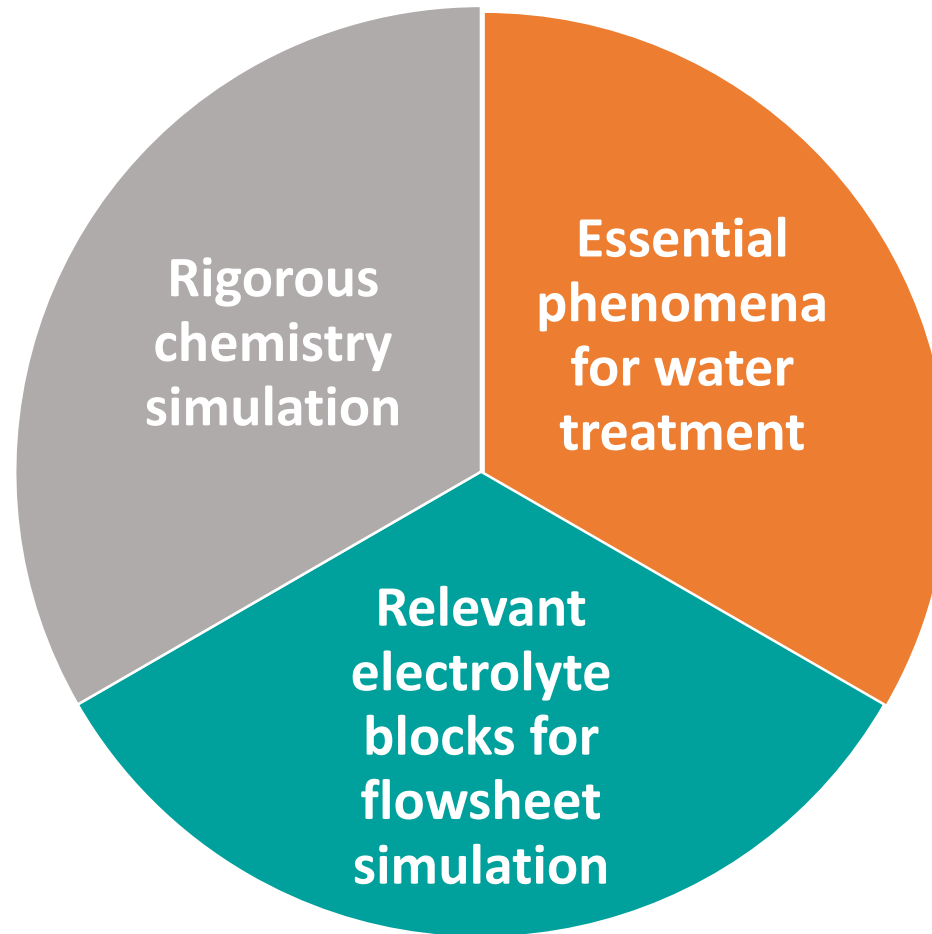
Increase confidence

- Save lab time by calculating autoclave charging conditions
- Better focus experiments by running simulations first
- Predict how corrosion will evolve based on extreme value statistics
- Reduce risk of catastrophic failures

Upstream water treatment simulation needs

Water chemistry demands a unique blend of expertise

Modeling the interactions of common ions, pollutants and impurities, organic material with water and with respect to each other



Taking surface reactions and kinetics / mass transfer into account

Other heat and material balance flowsheet simulators...

..lack rigorous chemistry and phenomena

Standard flowsheet operations as well as specialized units, i.e., membranes, reaction kinetics

Service levels available

Combining training, support, consulting, data validation bundles



BRONZE

BASIC

*Installation,
Configuration,
Break-fix and Bugs*

Free with license
purchase



SILVER

STANDARD

*For building
confidence
in your electrolyte
simulation work*



GOLD

PREMIUM

*When you want
and need
mission-critical
success
in your work*



PLATINUM

SUPERIOR

*OLI onsite
training and
consulting to
ensure your
success*

Pre-paid Service Levels

Pricing example for silver level service

Pricing for a small OLI client

FEATURE	Silver Services DESCRIPTION
Support & consulting	Phone and Web Support; 8 hour initial response
EST working hours for response time	8 hours (1 day) application consulting
Training	Free on-demand web training
Online class credit may be applied towards onsite	Three, 2 hour custom online sessions
	2 hours/ month ad-hoc Q&A session w/ consultant
Data validation discussions	Data validation services for up to 3 systems - selected validation plots (up to 25) + 1 hour discussion with OLI technical consultants regarding chemistry

For an annual lease of \$40,000 with 6 users

Silver Service price: \$7,500

Value of package: \$24,200

Value-added OLI services: \$16,700

Client Benefits

- ✓ Leverage OLI’s support to train additional users and increase skills and capabilities of existing users
- ✓ Enhance internal credibility of modeling team and deliver better business outcomes with accurate insights
- ✓ Lock into a savings of \$16,700 per year with a silver services contract
- ✓ Incorporate services into budget cycle and avoid ad-hoc approvals during the year

Pricing example for gold level service

Pricing for a mid-size OLI client

FEATURE	Gold Services Package DESCRIPTION
Support & consulting	Phone and Web Support; 6 hour initial response
	EST working hours for response time 24 hours (3 days) application consulting
Training	Free on-demand web training
	Online class credit may be applied towards onsite Six, 3 hour custom online sessions
	4 hours/ month ad-hoc Q&A session w/ consultant
Data validation discussions	Data validation services for up to 5 systems - selected validation plots (up to 50) + 2 hours discussion with OLI technical consultants regarding chemistry

For an annual lease of \$75,000 with 15 users

Gold Service price: **\$30,000**

Value of package: **\$49,200**

Value-added OLI services: **\$19,200**

Client Benefits

- ✓ Leverage OLI's support to train additional users and increase skills and capabilities of existing users
- ✓ Enhance internal credibility of modeling team and deliver better business outcomes with accurate insights
- ✓ Lock into a savings of \$19,200 per year with a gold services package
- ✓ Incorporate services into budget cycle and avoid ad-hoc approvals during the year

New V9.6 advances in the OLI platform

Thermodynamics

Thermodynamic breakthrough for supercritical conditions in oil and gas production

MSE-SRK

Chemistry

Break-through chemistries for multiple industries

ZnS, PbS, CaSO₄

**Mercaptans
Arsenic/Struvite**

**Potash
lithium**

Corrosion

New corrosion resistant alloys for oil & gas

**Alloys 28, 29,
2535 and 2507**

New units

For industrial water treatment (using ESP)

Reverse osmosis

Pump

Incinerator

Why choose OLI Systems?

Pioneers in the understanding and application of water chemistry science to upstream applications

Breakthrough innovation in **MSE SRK thermodynamic model** for today's challenging upstream conditions

Established industry leader with strong presence in top oil and gas majors

Highly accurate and **rigorous modeling & simulation** of production chemistry applications

Trusted advisors for the R & D experts in water chemistry applications with a proven track record

Excellent service and support; with cost effective technical support, education and application consulting

Comprehensive portfolio of tools and capabilities for water chemistry experts in industrial markets

Technology integrations with process modeling software ecosystem

Some of the benefits to you

Accurately simulate

- Scaling tendency
- Scale formation
- Corrosion rates

Increase staff value

- Productivity
- Effectiveness
- Organizational impact
- Business value

Improve operating margins

- Higher operational efficiency
- Less down time in production

Receive proven expert assistance

- Training
- Applications building
- Data validation discussions

Mitigate risk

- Avoid catastrophic failure
- Prevent problems before they occur

Getting started with OLI access today



Ask us for a free, online consultation for your upstream challenges















Evaluation copies are available, or try our 4-month starter package to ensure your success



Several software leasing options are available with prepaid, annual or quarterly payments

Find us on Social Media



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OLI Simulation Group	Support questions	https://www.linkedin.com/groups/12093538		

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Thanks for your attention!