AVEVA PRO/II Simulation Advisory Group

San Francisco

November 14, 2022

Hosted by AVEVA Simulation and Learning Product Portfolio Team

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MOSCONE CONFERENCE CENTER – SAN FRANCISCO

NOVEMBER 14, 2022

AVEVA PRO/II Simulation Advisory Group Meeting

Activity Plan

Introductions

Product Roadmap and Highlight Features

Customer (Aha) Ideas Board and Prioritization

@Lunch

Support Update

Customer Stories and Round-table Discussion

Success Story and MySep Presentation

@AWC Welcome Reception 4:00pm – 6:00pm

@Advisory Group Dinner 6:30pm

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AVEVA™ PRO/II™ Simulation Release Readiness Plan

Releases in 2022
v 2021.2 & v2022

Planned Releases
v2023

Other Features
Proposed & Under Consideration

Release 2021.2 & 2022

- Refining Reactor Models
  - Isomerization
  - Visbreaker
  - Delayed Coker
  - HF Alkylation
  - H2SO4 Alkylation
- Standard Gas Turbine unit operation
- Yield specification for conversion reactors
- Integration with MySep

Release 2022.1 (planned Dec 2022)

- Defect fixes

Roadmap Items and dates are subject to change based on demand and resources

Release 2023 (January 2023)

- CapEx calculations for Case comparisons
- GHG and Carbon Capture
- Hydrotreater/Hydrocracker
- XML report through COM p2oledbs
- Calculate concentrations in vapor phase
- New Thermochemical Calorie unit of measure
- FF plots for distillation columns
- Containerize AMISM .apn file along with .apj file
- Add UOM using Watt(W) to Heat Transfer Coefficient and Fouling Coefficient in Default Unit of Measure for the Problem Data Input window.
- PI EDI Integration – Support PI time slicing
- Uncheck "KG Tower/FRI Data in XML File" by default in column print option.
- Stability Improvement - Accessing stream LLE blocks
- Mass Flow rate in P2View, PROII Database Viewer

Under Consideration

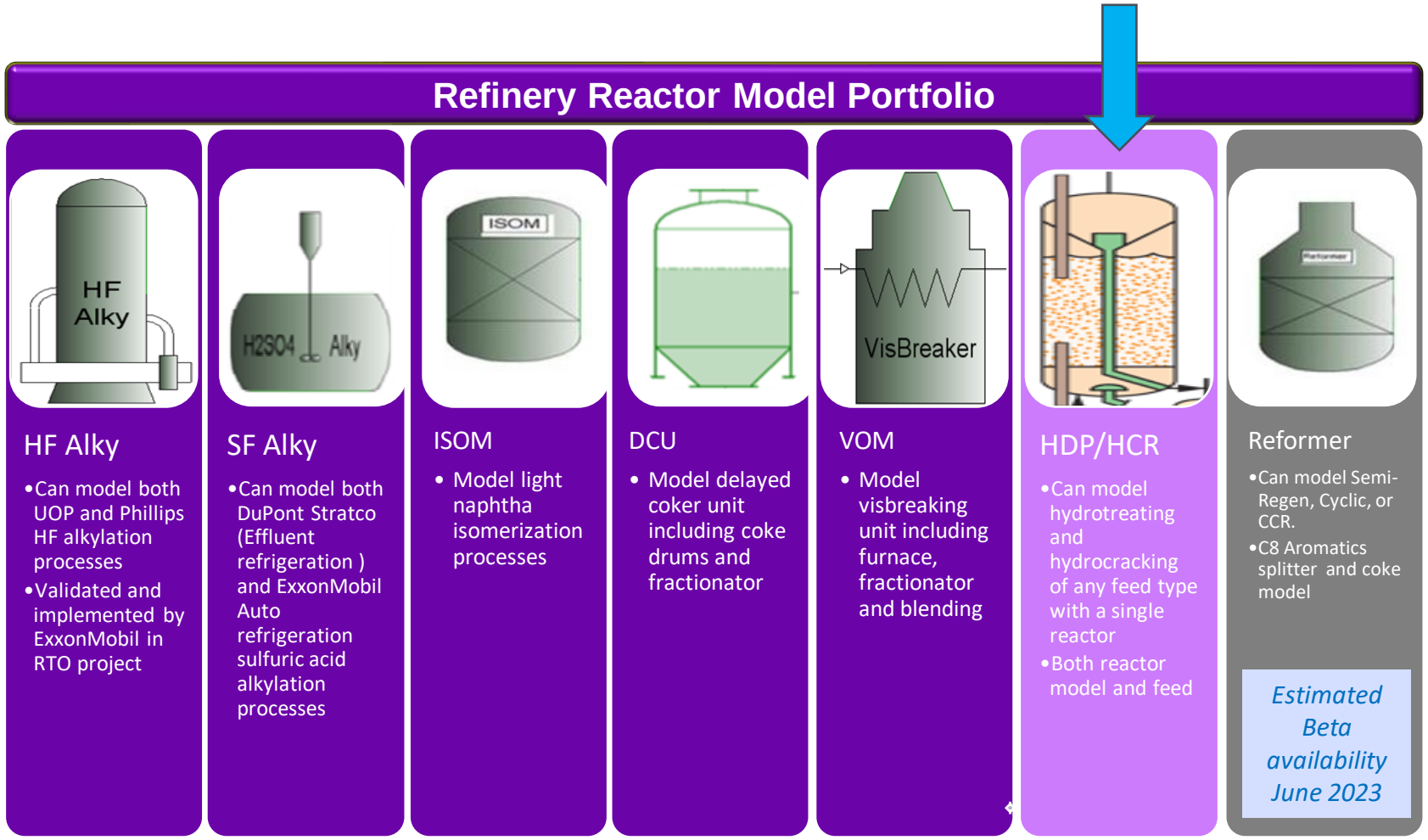
- Reformer
- LP Update Support
- GUI Visual Improvements
- UI/UX Level 3 Compliance for ribbon icons
- Vapor Frac specs on Partial Condenser
- Heat transfer in pipe unit operation
- Divided Wall Column
- Excel view for stream calculator
- Calculation Sequencing
- Improved HXRIG&HTRI convergence
- Navigational access to data on objects, color coding
- New Distillation Shortcut method
- Distillation column auto-troubleshooting
- User-based password protection on models

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AVEVA PRO/II Simulation

New in Jan 2023 release

Refinery Reactor Model Portfolio



HF Alky

- Can model both UOP and Phillips HF alkylation processes
- Validated and implemented by ExxonMobil in RTO project

SF Alky

- Can model both DuPont Stratco (Effluent refrigeration) and ExxonMobil Auto refrigeration sulfuric acid alkylation processes

ISOM

- Model light naphtha isomerization processes

DCU

- Model delayed coker unit including coke drums and fractionator

VOM

- Model visbreaking unit including furnace, fractionator and blending

HDP/HCR

- Can model hydrotreating and hydrocracking of any feed type with a single reactor
- Both reactor model and feed

Reformer

- Can model Semi-Regen, Cyclic, or CCR.
- C8 Aromatics splitter and coke model

Estimated Beta availability June 2023

Released with 2022 (July 2022)

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Demos

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Aha Ideas Review and Prioritization

Idea reference	Idea name	Average of Feedback	Change	Theme
SIMIDEAS-I-123	Calculator Enhancement	10	Up	UnitOp Updates - Other
SIMIDEAS-I-228	When you turn off (unselect) a Case Study in PRO/II - you lose the data	10	Up	UI
SIMIDEAS-I-148	Use of DEFINE directly in a stream [PRO/II] on behalf of European Customer	9	-	Stream Updates
SIMIDEAS-I-249	[Onbehalf of Cust] Addition of new packing data for flooding calculation in PRO/II distillation model	8	Up	UnitOp Updates - Column
SIMIDEAS-I-121	Divided wall column enhancements	8	Up	UnitOp Updates - Column
SIMIDEAS-I-132	Display LHV and GHV in mass basis	8	Up	Property Calculations
SIMIDEAS-I-110	Change the numbering scheme on the columns within ProII	7	Down	UnitOp Updates - Column
SIMIDEAS-I-250	[Onbehalf of Cust] Improvement of reflux condenser calculation by PRO/II rigorous heat exchanger model for preliminary sizing purpose	7	Down	UnitOp Updates - Column
SIMIDEAS-I-189	Add an application guideline of NIST23 and GERG08 thermodynamics.	7	Up	
SIMIDEAS-I-149	Ability to vary calculator constant via Controller unit	7	Up	UnitOp Updates - Other
SIMIDEAS-I-230	Mach No. check function for PRO/II PIPE unit on behalf of Cust	7	Up	UnitOp Updates - Other
SIMIDEAS-I-129	Enhancement request for Relief Valve	7	Up	UnitOp Updates - Other
SIMIDEAS-I-135	Breakpoint behavior – ability to examine streams/units and resume calculations	7	Up	Solver

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Aha Ideas Review and Prioritization

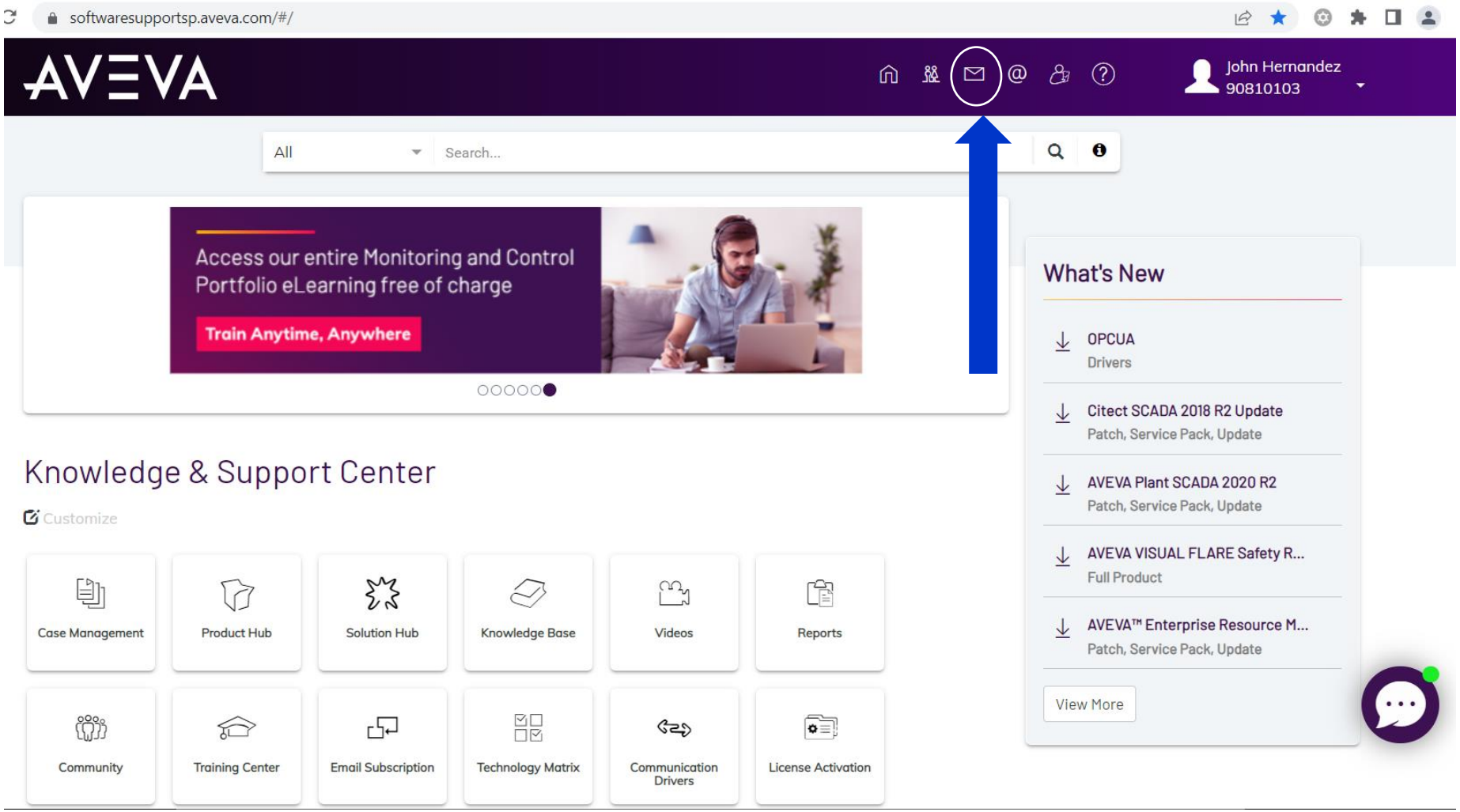
Idea reference	Idea name	Average of Feedback	Change	Theme
SIMIDEAS-I-143	Resize Data Review Window	7	Up	UI
SIMIDEAS-I-190	Update column random packing with Koch Glitch “INTALOX Ultra-N (metal) type	7	Up	UnitOp Updates - Column
SIMIDEAS-I-102	Add Li and Wang method as an efficiency method for Gas/Solid cyclone unit.	6	Up	UnitOp Updates - Other
SIMIDEAS-I-128	Enhancement request for Pump Curves	6	Up	UnitOp Updates - Other
SIMIDEAS-I-40	Column: Add Vapor Fraction Spec to Partial Condenser	6	Up	UnitOp Updates - Column
SIMIDEAS-I-80	Sequence block	6	Up	Solver
SIMIDEAS-I-116	Improve curve-fitting of compressor (and pump) data in PRO/II	6	Up	UnitOp Updates - Other
SIMIDEAS-I-134	Update the Case Study feature to control the Upstream Stream Selector	6	Up	UnitOp Updates - Other
SIMIDEAS-I-138	Add a toggle option (on/off) in the column to turn on “auto-troubleshooting”.	6	Up	UnitOp Updates - Column
SIMIDEAS-I-215	Make Extended Antoine correlation available in PRO/II	6	Up	Property Calculations

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@Lunch

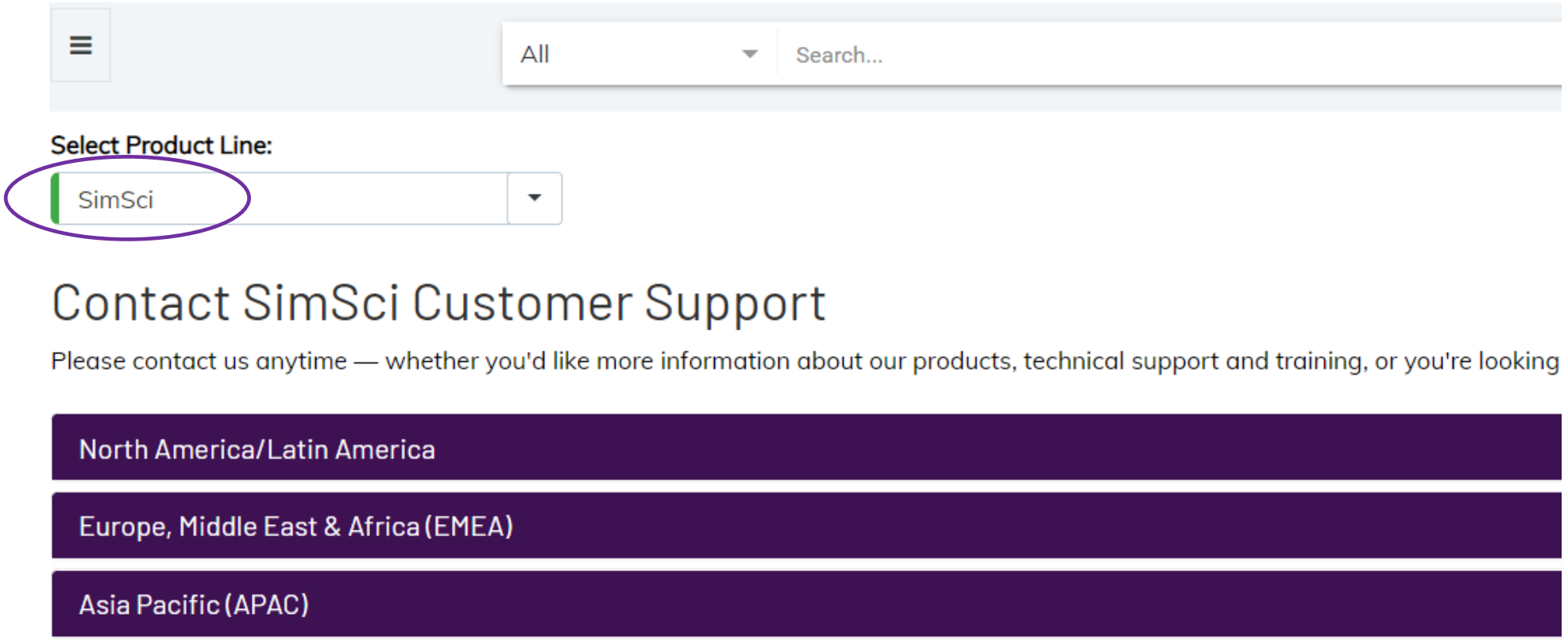
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Support Site for Self-Service softwaresupport.aveva.com



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Support Site for Self-Service Contacts



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Support Site for Self-Service Contacts

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Brasil		55 11 2165 5283	simsci.brasil@aveva.com
Canada	8:00 a.m. - 5:00...	1-800-966-3371 / +19496398500	support.simsci@aveva.com
Chile		56 2 4767616	simsci.latino@aveva.com

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Customer Round-table Discussions and Presentations

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Cloud Discussion – AVEVA's Guiding Principles

AVEVA Simulation provides for steady state and dynamic process design and simulation in the Cloud

- Onboarding new project stakeholders is a matter of a few clicks.
- Subscription access to any of the applications
  - AVEVA PRO/II Simulation
  - AVEVA Process Simulation
  - AVEVA Dynamic Simulation
- Removes requirement for complex IT setups on-premise
- All models and data are managed through highly secure industry protocols.

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Cloud discussion

- Does your organization have an initiative to move to Cloud, what kind of timing?
- What are key things you would look for from a Cloud offering with our applications?
- What kind of user experience would you like to see facilitated in our platform(s)?
- What will induce you to move to our Cloud platform?
- Would you / your organization permit you to do a trial use of AVEVA's Cloud for Simulation?

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Indian Oil Corporation limited

AVEVA enabled IOCL to increase LOBS production by revamping throughput and increased product yield

Goals

- To increase the yield of 500N Lube Oil grade and reduce black oil generation
- To increase production of Group II LOBS (Lube Oil Base Stock)
- To increase production flexibility in different grades as (70N, 150N & 500N) as per the market demand

Challenges

- Accurate design of feed processing units that prepares feed for the existing LOBS producing unit to achieve the desired yield of LOBS such as 70N, 150N and 500N grades.
- Design complete process unit along with auxiliary equipment and specifications
- Predicting the LOBS specification results such as viscosity, viscosity index and pour point

Outcome

- Significant increase in Group II LOBS production, an increase of ~ 10% production
- Increased capacity of feed processing unit (~ 650 TMTPA)
- Simulated specification results were consistent with production data
- In house process-unit design to improve yield of LOBS processing unit

Software: AVEVA Pro/II Simulation



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MySep

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@AWC Welcome Reception

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@Advisory Dinner – 6:30 pm – A short walk away



Fogo de Chão Brazilian Steakhouse

4.4 ★★★★½ 2,834 reviews · $$$

Brazilian restaurant

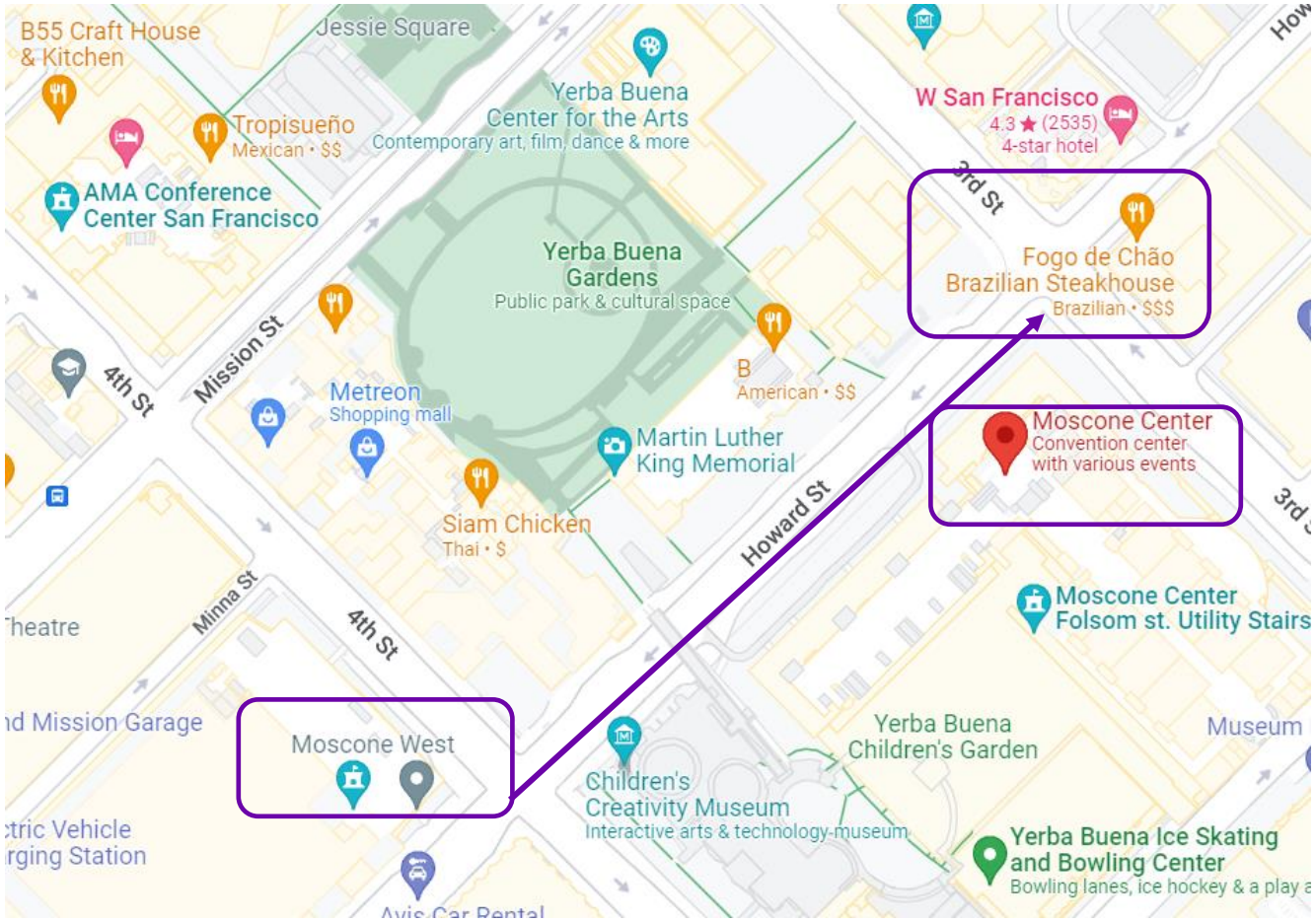
Address: 201 3rd St Suite 100, San Francisco, CA 94103

Hours: Open · Closes 2PM · Reopens 4:30PM

Takeout: Now · Ends 10PM · More hours

Menu: fogodechao.com

Phone: (415) 427-0004



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Wrap Up

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ABOUT AVEVA

AVEVA is a global leader in engineering and industrial software driving digital transformation across the entire asset and operational life cycle of capital-intensive industries.

The company's engineering, planning and operations, asset performance, and monitoring and control solutions deliver proven results to over 16,000 customers across the globe. Its customers are supported by the largest industrial software ecosystem, including 4,200 partners and 5,700 certified developers. AVEVA is headquartered in Cambridge, UK, with over 4,400 employees at 80 locations in over 40 countries.

aveva.com

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AVEVA

Supplemental Information

AVEVA World Conference

Airports | Rideshare | BART (public transit) | Parking | Visa requests
Travel requirements | Sustainable travel trips

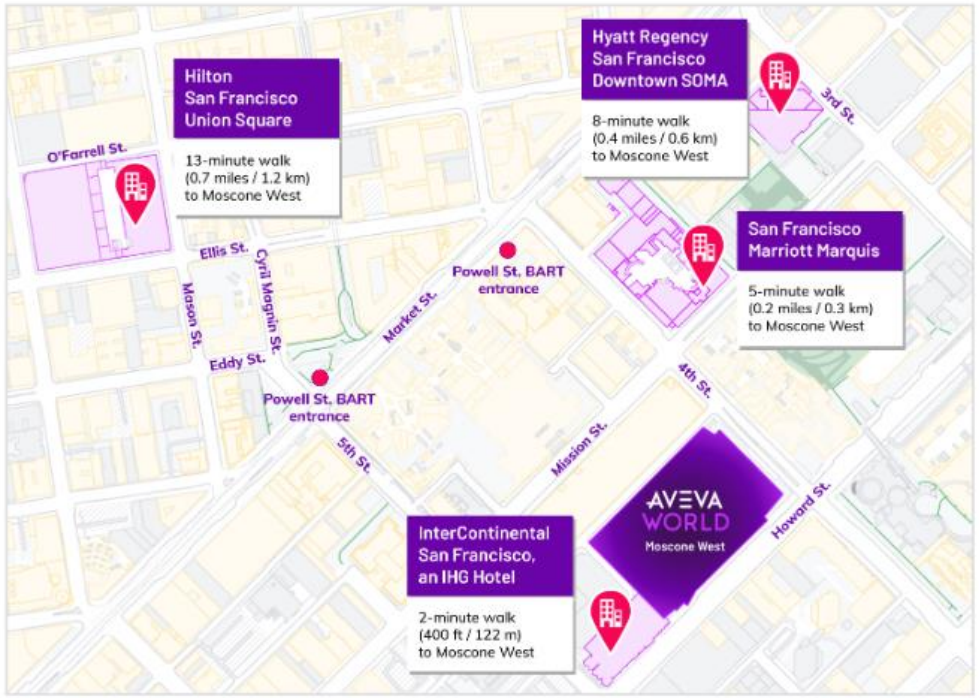
Directions to the conference venue area

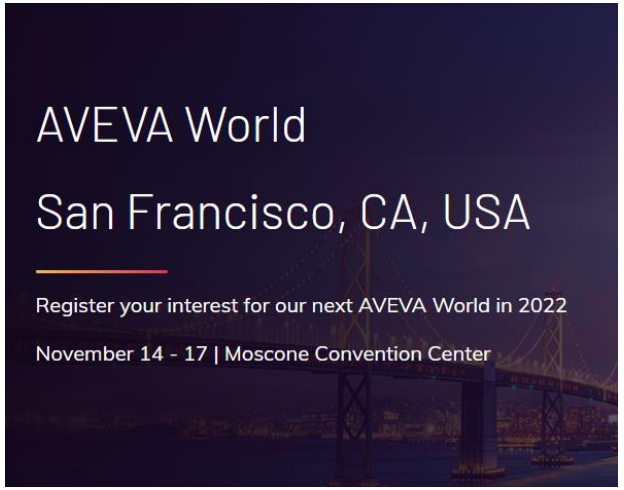
Moscone West Convention Center

800 Howard Street
San Francisco, CA 94103

The Moscone West Convention Center is located right in the heart of downtown San Francisco's bustling SoMa neighborhood.

As the conference venue is just off the main thoroughfare, Market Street, you'll find that many hotels are a short walk away. The area provides easy access to all of San Francisco's main attractions and various forms of public transportation, including BART.





Portfolio marketers will be in touch to organise tracks

- Edward Aaron-Obelley coordinating all portfolio tracks
- Simulation and Learning: James Wade
- Engineering and Execution: Kalam McTaggart
- Planning and Scheduling: Joseph McMullen
- Production Optimization: Matt Newton (Joseph McMullen)