



ACCELERATING  
INNOVATION

# **DeltaV™ Mimic v6.LTS Enables Enterprise-wide Operational Improvements**

## Disclaimer

The following slides discuss future development plans and are forward-looking in nature. They do not represent a commitment to deliver specific functionality within a specific timeframe. Actual features in future releases may differ from what is shown here.

The information and/or opinions expressed in this presentation are those of the authors and do not necessarily represent official policy or permission of Emerson or Emerson Exchange.

## Important Reminders

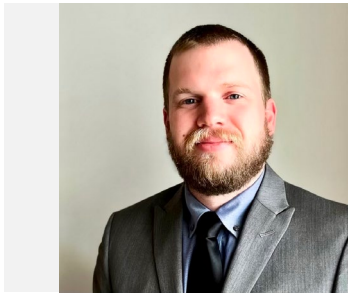
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Senior Manager – Application Engineering / Emerson



# Agenda

**SEAN KILGORE**

**DeltaV Mimic Overview**

**v5.4 and v5.5 Updates**

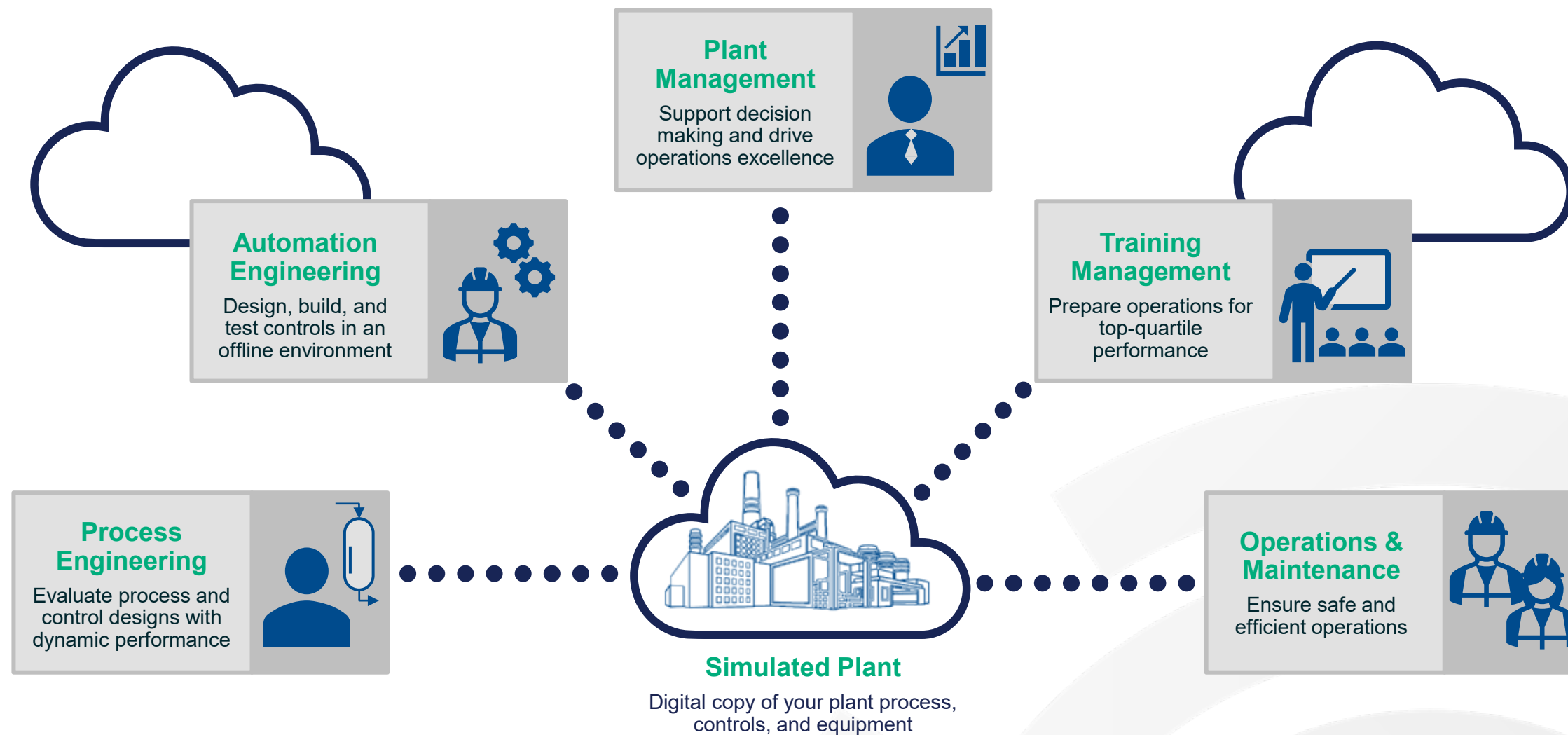
**DAVID SOLBERG**

**v6.LTS Updates**

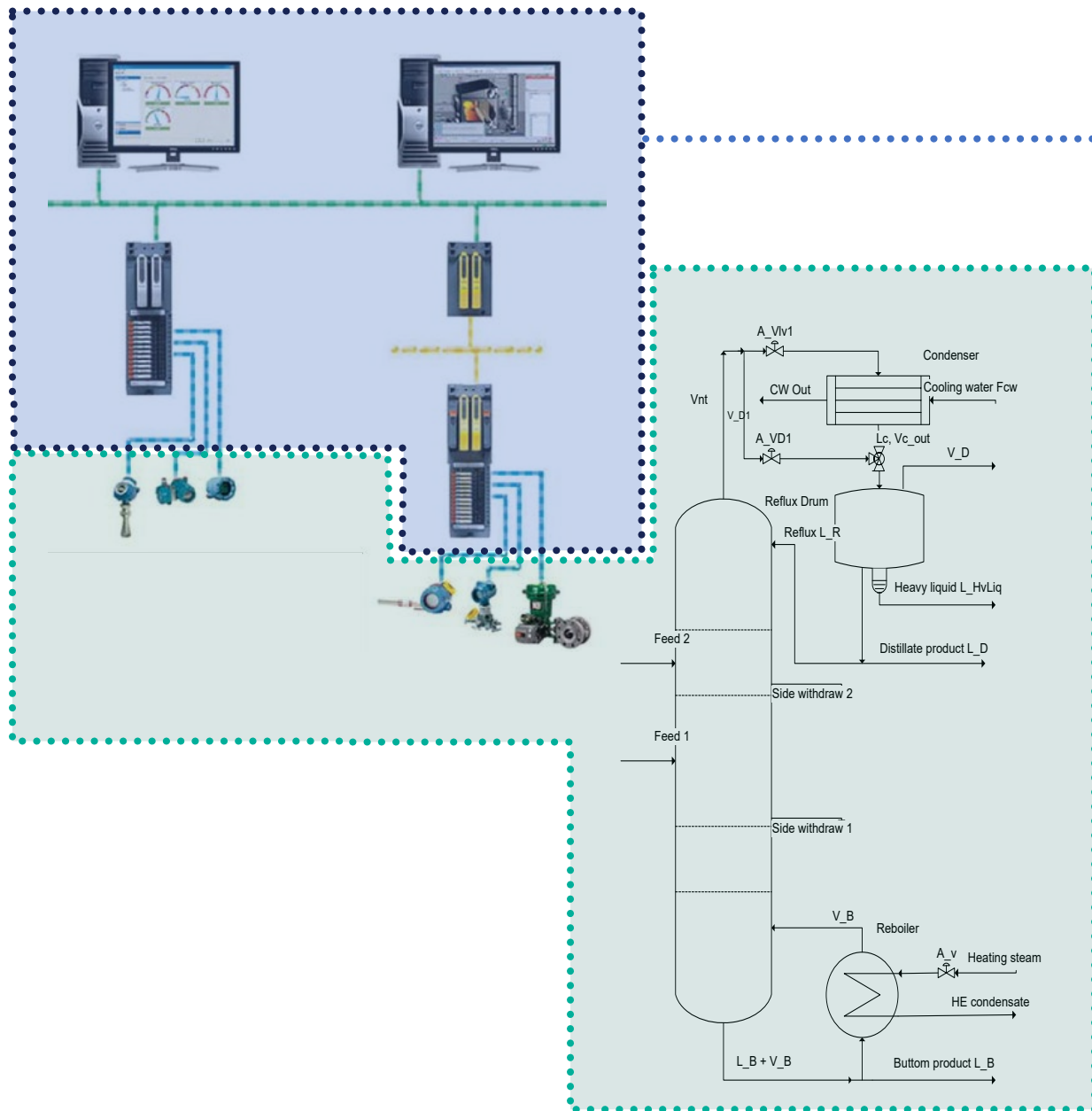
**Roadmap**

# DeltaV Mimic Overview

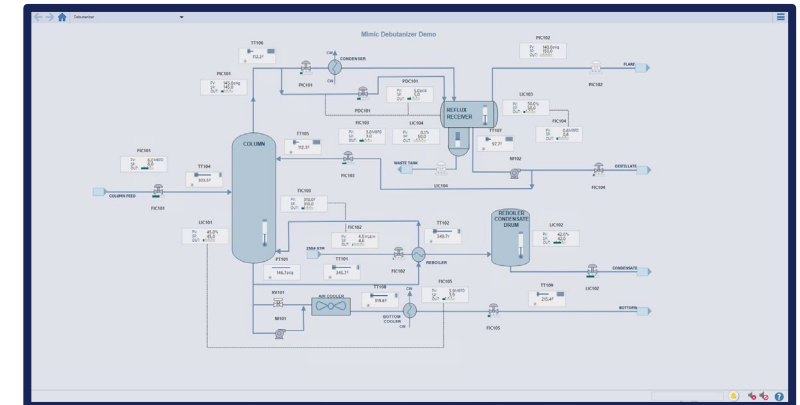
# Dynamic Simulation Provides an Environment for Collaboration Across Stakeholders in Your Organization



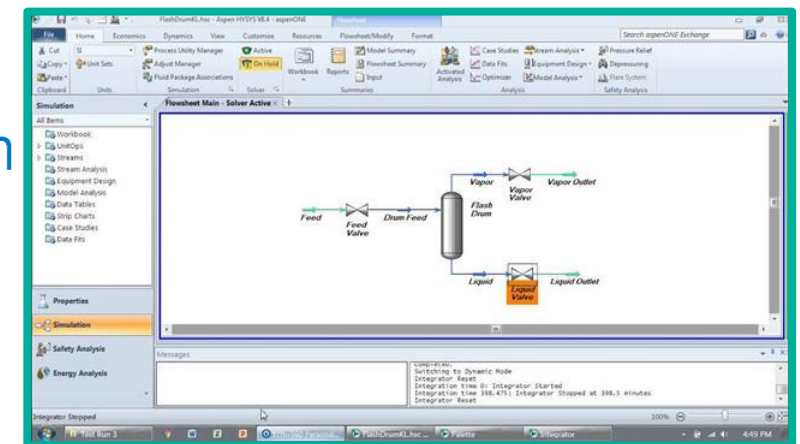
# What is Dynamic Simulation?



DeltaV Simulate  
And other Emulator(s)



DeltaV Mimic |  **aspentech**  
Dynamic Process & IO Simulation

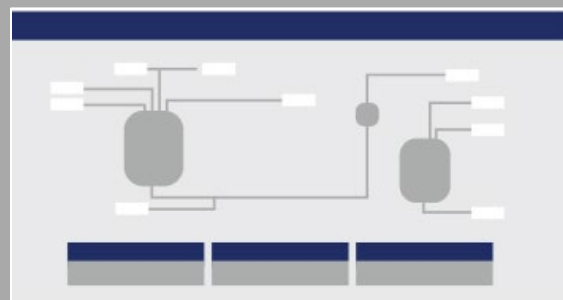


DeltaV Mimic Field 3D  
Immersive Virtual Reality

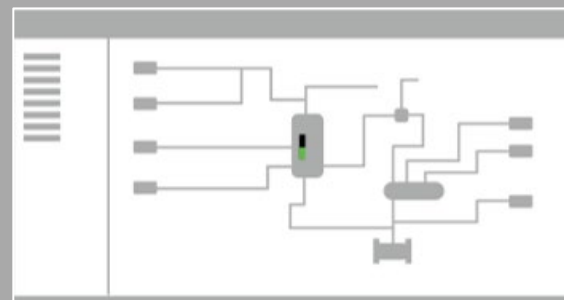


# An Innovative Platform Designed Around End-User Experience and Results

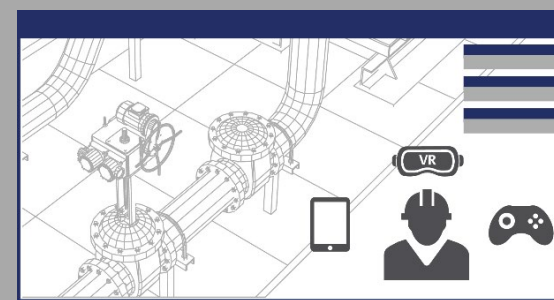
Instructor



Engineering



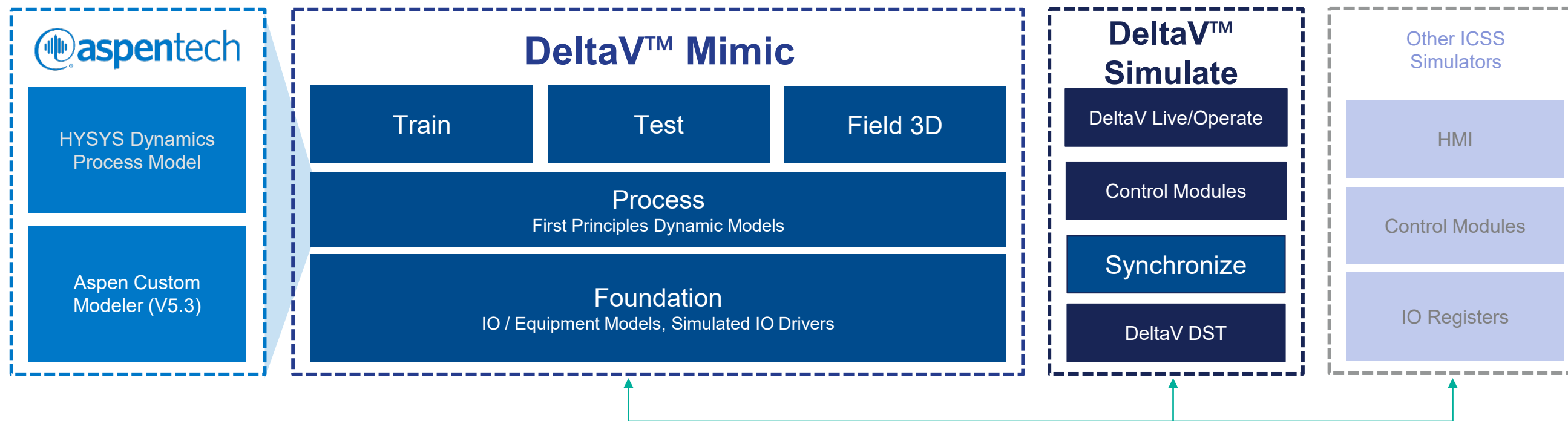
Field Operator



Panel Operator



On Premise Virtual or Emerson Cloud Hosted 



# User Driven Enhancement Program for DeltaV Mimic

Do you have an idea for an enhancement to one of Emerson Automation Solutions offerings?

Share it at  
[userideas-emerson.com](https://userideas-emerson.com)

- As part of Emerson's commitment to innovation, continuous improvement, and close collaboration with customers, the User Driven Enhancement Program (UDEP) was created to give the Emerson user community a coordinated voice to directly participate in and influence Emerson's product enhancement plans.
- The program provides a formal mechanism for users to directly input and drive the development of specific enhancement ideas to existing functionality they value most and would like to see in Emerson Automation Solutions offerings.



# **v5.4 and v5.5 Updates**

# What's New in Mimic v5.4

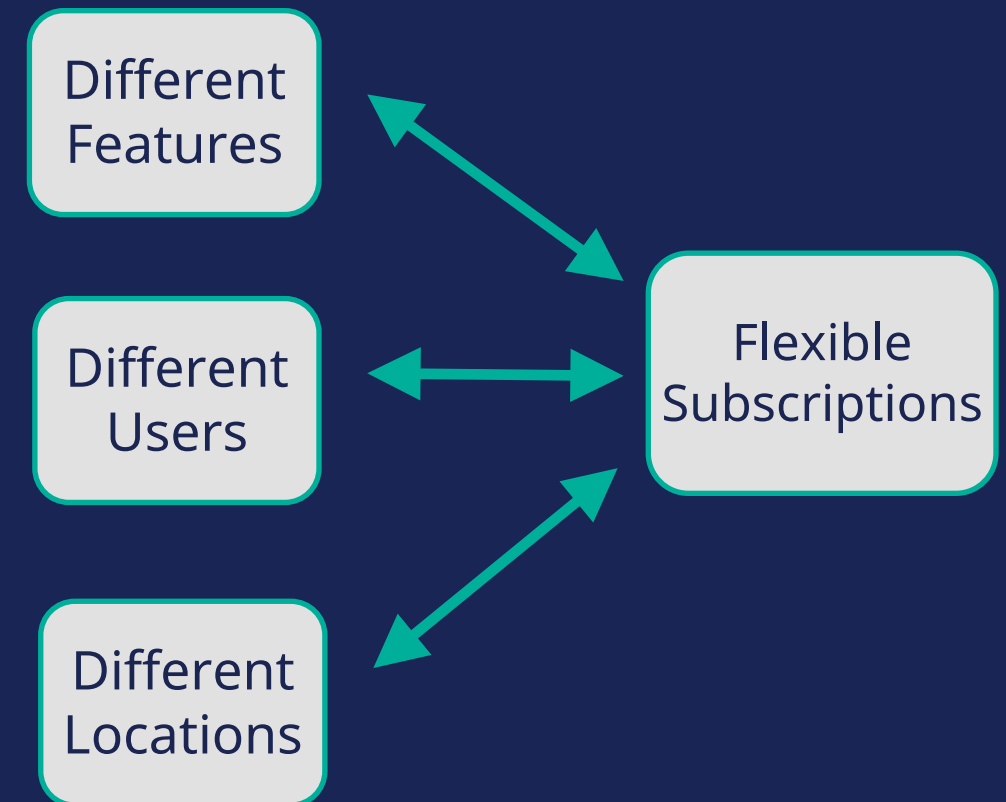
## v5.4 (Nov 2023)

- New Flexible Subscriptions
- Simplify Synchronize Licensing
- Rockwell Echo Bridge releases
- Various QOL (Quality of Life) improvements and a bug fixes
- Added support for CSLS modules in the FHX Utility with IO in composite blocks for SIO Tag creation in Mimic

# Flexible Subscriptions

## Flexible Licensing Model

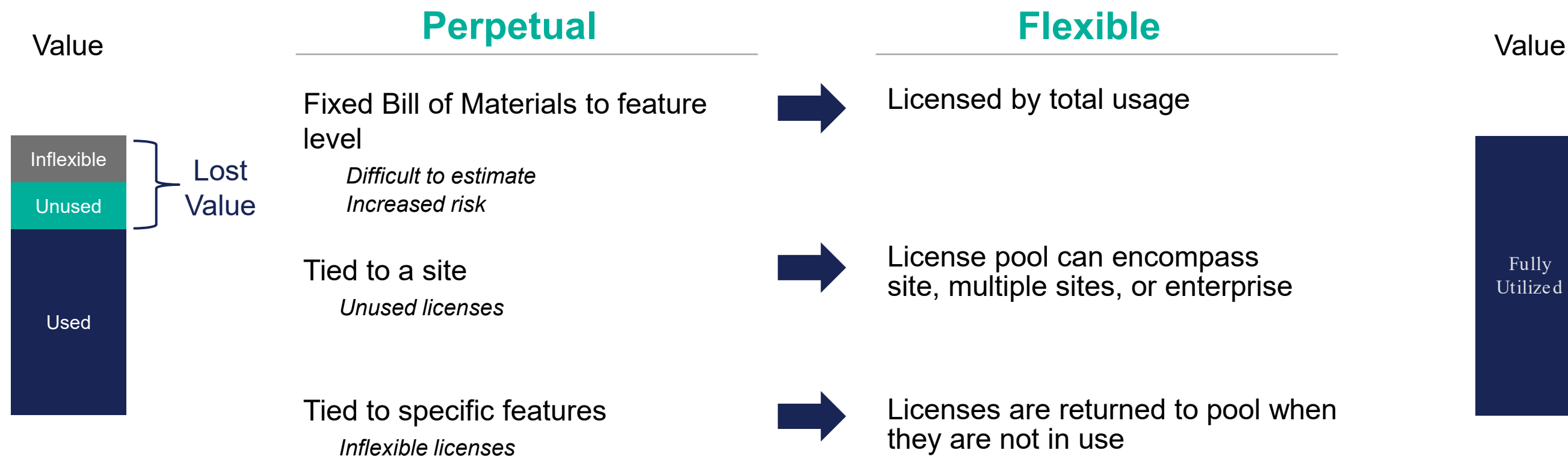
- When licenses are used, licenses are checked out from the license pool
- When licenses are unused, they can be returned to the pool
- Allowing you to maximize when and where the software drives the most value for your organization
- Users are not locked out of features that have not been licensed yet



# What is a Flexible Subscription?

## Flexible Subscription

A new mechanism that allows you to utilize your licenses **WHEN** and **WHERE** you want



# Using Flexible Subscription to Solve Problems

**1** Complex BOMs for definition of software licenses on projects.

→ Easy to define and scale licensing for projects.

**2** Unused licenses are trapped at a site.  
Example: User licenses 10 workspaces at Site A and only uses 9

→ User will only use Flexible Subscription for 9 workspaces at Site A. Additional Flexible Subscription would be available for other sites. No licenses are stranded at a site.

**3** Difficult to scale from site to enterprise.

→ Flexible Subscriptions automatically scale from site to enterprise based on the volume. User gets credit for increased volume and does not need to renegotiate discounts.  
Flexible Subscription distribution to sites is built in. License pool can be used to distribute license to sites easily.

Mimic Explorer - Session ID 1 - FSJ\_DEMO

File Edit Tools Help

Simulation Database

FSJ\_DEMO

- Library
- Global Registers
- Views
- Modeling
  - ADDITIONAL\_JO
  - MODELING\_AND\_JO
- Training
- Snapshot Control

Models, Templates SIOTags - ADDITIONAL\_JO

NAME	ITEM	NUMBER OF OBJECTS
NEW_AREA	Area	Models:1 Sub-Areas:0
External Models	External Models	0
Templates	Templates	9
SIOTags	SIOTags	1000

System ID: 0028-0100-4242 Logged in as: tom Version: 5.4.0

# What's New in DeltaV Mimic v5.5

## v5.5 (Aug 2024)

- Aspen Plus® Dynamics Link
- Aspen HYSYS® Dynamics v14 Support
- Emerson PipelineStudio™ Link
- Flow Tuning Assistant for Flexible Subscription users
- 64-bit version of Mimic is now supported for DeltaV installs which improves performance and support for large projects
- Train Updates

# v5.5 Powerful Modeling Capability with Aspen HYSYS Link and Aspen Plus Link

Developed to Incorporate Dynamic Models into Mimic Simulation

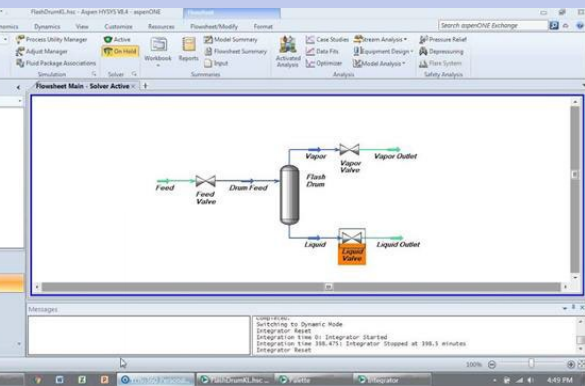
## DeltaV Mimic Simulation

Test Bench

Train

Field 3D

Process



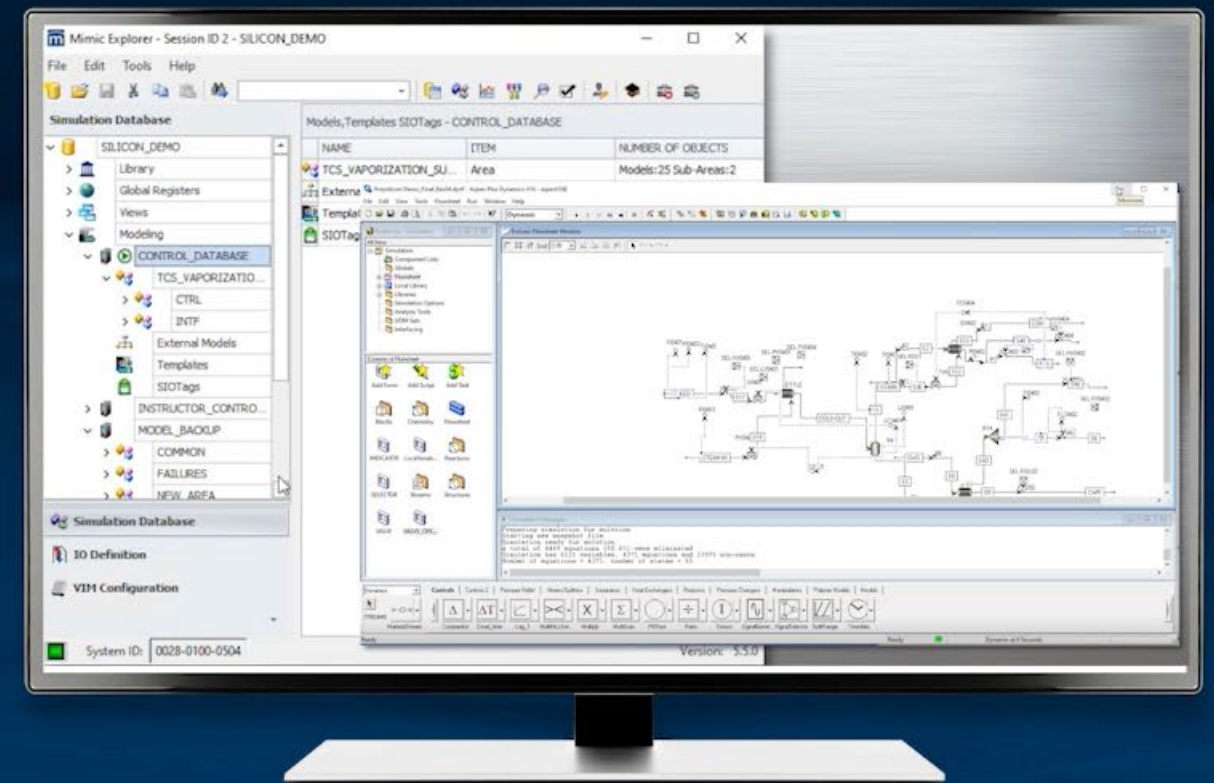
Foundation

IO and Equipment Models, Connectors

Gold standard for dynamic simulation

- Integration to one or multiple control systems
- Synchronize multiple process modeling cases
- Improve training efficiency and results with comprehensive operator competency suite
- Automate testing with Mimic Test Bench scripting
- Quickly restore different process states or conditions with snapshots
- Integrate with immersive virtual reality for combined field and board operation

# DeltaV™ Mimic and Aspen Plus® Integration



# Emerson PipelineStudio™ Link

Expanded Connectivity

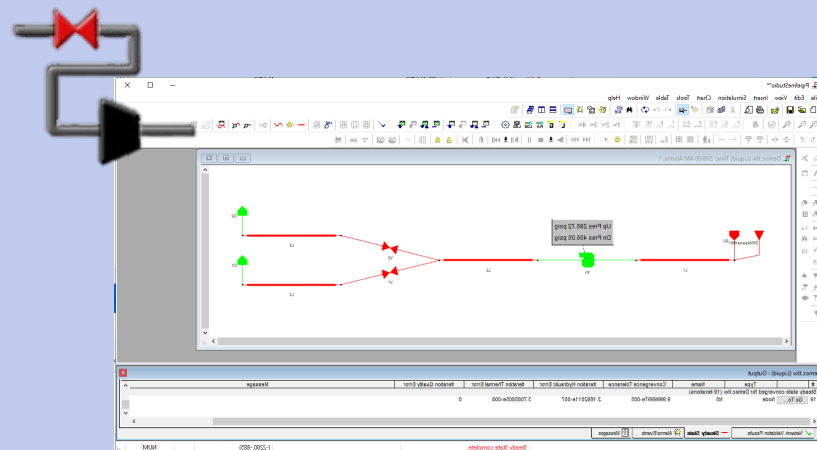
## DeltaV Mimic Simulation

Test Bench

Train

Field 3D

Process



Foundation

IO and Equipment Models, Connectors

## Simulate Gas and Liquid Pipelines

- PipelineStudio model engine is now integrated with Mimic
- Allows you to train pipeline controllers
- Emulate controls creating a complete dynamic model
- Allows you to see more accurate transient maximums given control responses

# Emerson PipelineStudio™ Link

## Expanded Connectivity

The screenshot displays the PipelineStudio™ interface. The main window shows a pipeline model with components: DRAljector0001 SU, L1, P1, L2, V2, V1, L3, L4, D2, and D1. A tooltip for P1 shows 'Up Pres 286.72 psig' and 'Dn Pres 456.05 psig'. The bottom window, titled 'Democ.tlw (Liquid) : Output', contains the following table:

#	Type	Name	Convergence Tolerance	Iteration Hydraulic Error	Iteration Thermal Error	Iteration Quality Error	Message
Steady state converged for Democ.tlw (19 iterations)							
19	Go To...	Node	9.9999997e-005	2.1692011e-007	3.7085805e-008	0	

Pipeline Model in PipelineStudio

# Emerson PipelineStudio™ Link

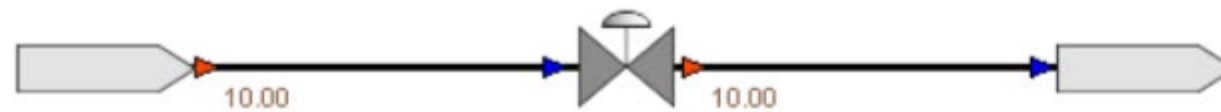
## Expanded Connectivity

The screenshot displays the Emerson PipelineStudio interface. On the left, the 'Mimic Explorer' window shows the project structure for 'MIMIC\_DATABASE', including 'IODEFINITION\_1' and 'PS\_LINK\_IODEF'. The main window shows a process flow diagram with components like pipes (L1, L2, L3, L4), valves (V1, V2), and pumps (P1, P10). Data points for flow, pressure, and temperature are shown at various points in the system. At the bottom, a table lists the IO definitions for the system.

SIO_TAG	ITEM_PATH	UNIT	OPERATION
* L3_PIPE_TAILFLOW	Pipe.L3.FlowDown		
* L3_PIPE_TAILPRES	Pipe.L3.PressureDown		
* L3_PIPE_TAILTEMP	Pipe.L3.TemperatureDown		
* L4_PIPE_HEADFLOW	Pipe.L4.FlowUp		
* L4_PIPE_HEADPRES	Pipe.L4.PressureUp		
* L4_PIPE_HEADTEMP	Pipe.L4.TemperatureUp		
* L4_PIPE_TAILFLOW	Pipe.L4.FlowDown		
* L4_PIPE_TAILPRES	Pipe.L4.PressureDown		
* L4_PIPE_TAILTEMP	Pipe.L4.TemperatureDown		
?	SU_FLOW	XregSupply.SU.Flow	EU
	SU_PRESSURE	XregSupply.SU.Pressure	EU
	V1_DWNSTREAM_PRESS	EquipBlockValve.V1.PressureDown	EU
	V1_FLOW	EquipBlockValve.V1.Flow	EU
	V1_POS	EquipBlockValve.V1.PercentOpen	Percent
	V1_UPSTREAM_PRESSURE	EquipBlockValve.V1.PressureUp	EU
	V2_DWNSTREAM_PRESS	EquipBlockValve.V2.PressureDown	EU
	V2_FLOW	EquipBlockValve.V2.Flow	EU

PipelineStudio integrated with Mimic

# v5.5 Automated Flow Tuning Assistant



Flow Tuning Assistant

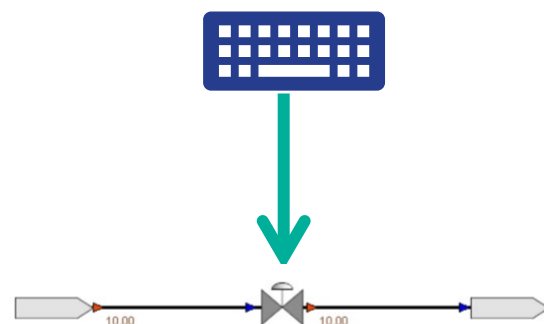
**Tuning Options**

VLV1 Block Resistor
Mass Flow Rate kg/s
Start Tune
Use Numerical Method 
Show Path Open in SimStudio Show Help

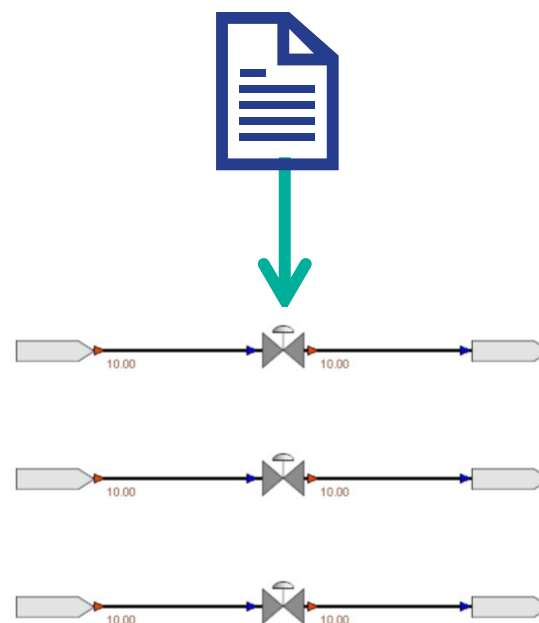
Tuning Target	Unit Selection	Tuning Actions	Problem Setup	Help
Desired Flow	10.00 kg/s	User Flow	0.00 kg/s	
Stop Tolerance			0.00500 kg/s	
Maximum Iterations	10	Current Iteration	0	
Current Flow	10.00 kg/s			
Current Error				0.00000
Initial Resistance	5.37	Current Resistance		533.34

# Automated Flow Tuning Vision

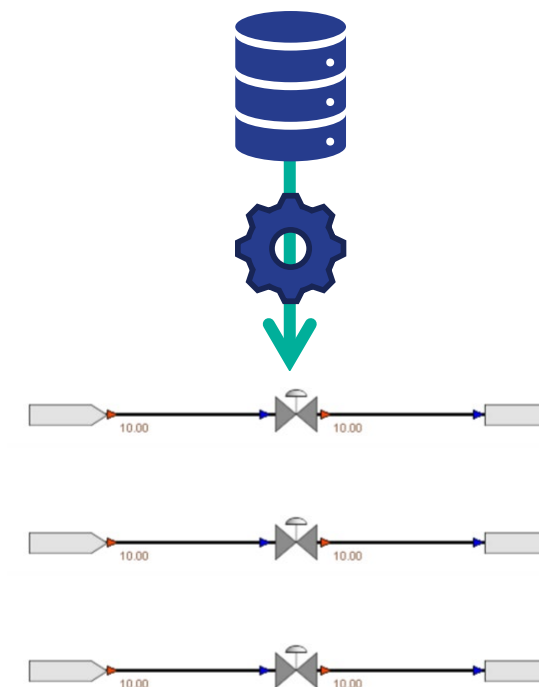
- Single Element
- Manual Source



- Multi Element
- File Source



- Multi Element (Entire Model)
- Automatic Historian Source



# What's New in DeltaV Mimic v6.LTS

## Enterprise Enhancements

- Enterprise Train
- Flexible Subscription Licensing Enhancements
- Standalone network licensing host installation option

## DeltaV Integration

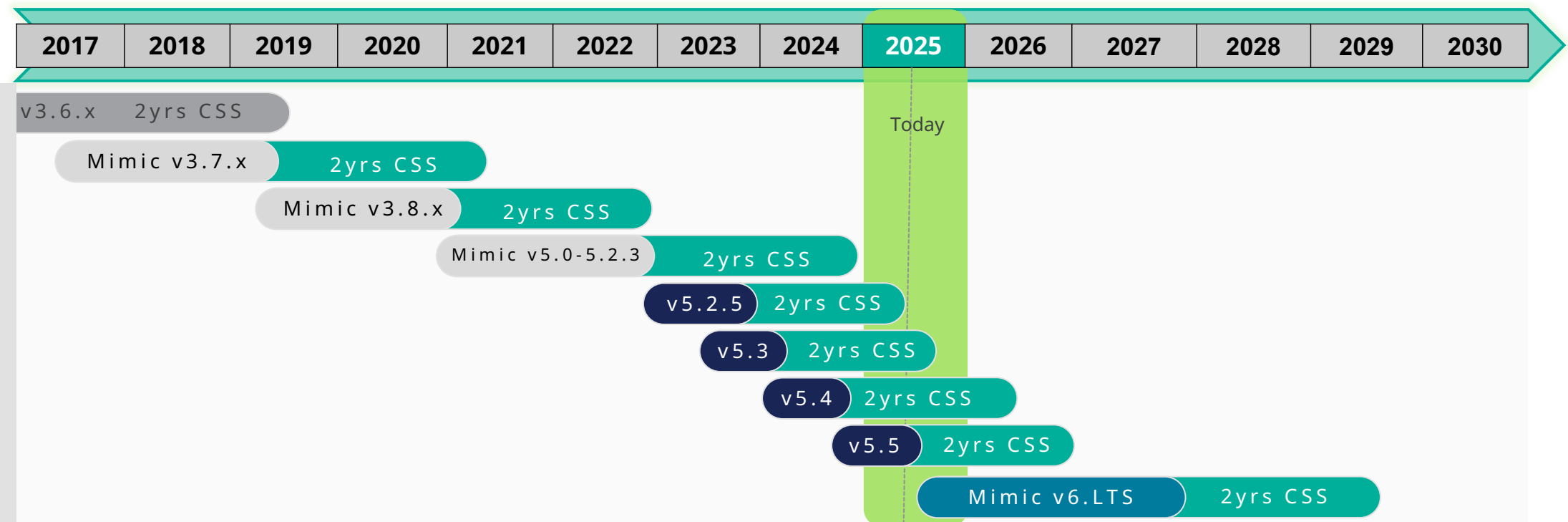
- Support for DeltaV Simulate Virtual Machine controller SimulatePro features (including increasing the running node limit to 512)
- DeltaV Profinet DST simulation
- DeltaV PK Flex support
- FHX Utility updates

## Other Enhancements

- Adoption of LTS with Feature Pack release model to bring you new features sooner
- Security improvements
- Copy/paste composition data between Process Modeling unit operations
- Additional support for setting Train user credentials

# Mimic Long-Term Support (LTS) and Lifecycle

- v5.3, v5.4, v5.5
  - Conventional Software Support is 2 years from release date of the next released version
- Starting in v6.LTS...
  - LTS Conventional Software Support (CSS) is still 2 years
  - The 2-Year CSS clock starts when the next LTS version is released
  - Each Feature Pack will be fully supported until the end of CSS for the LTS version

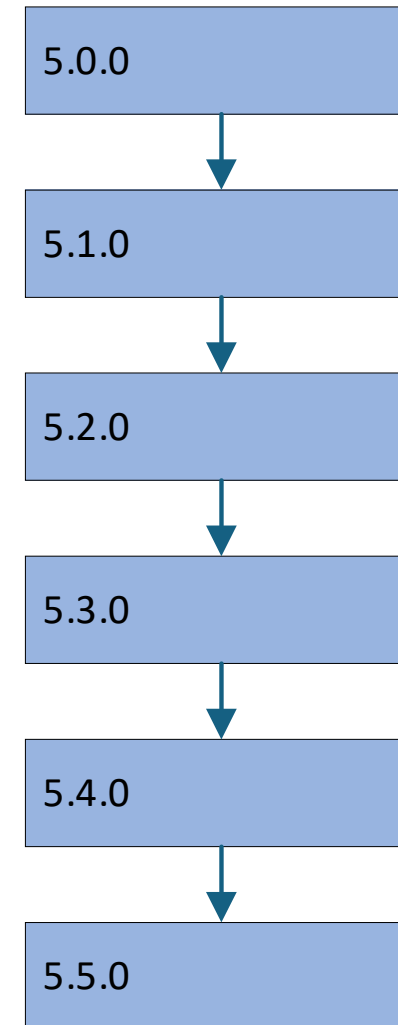


Version 5.2.3 and below are no longer supported and should upgrade to newer versions.

Conventional Software Support (CSS) is 2 years.

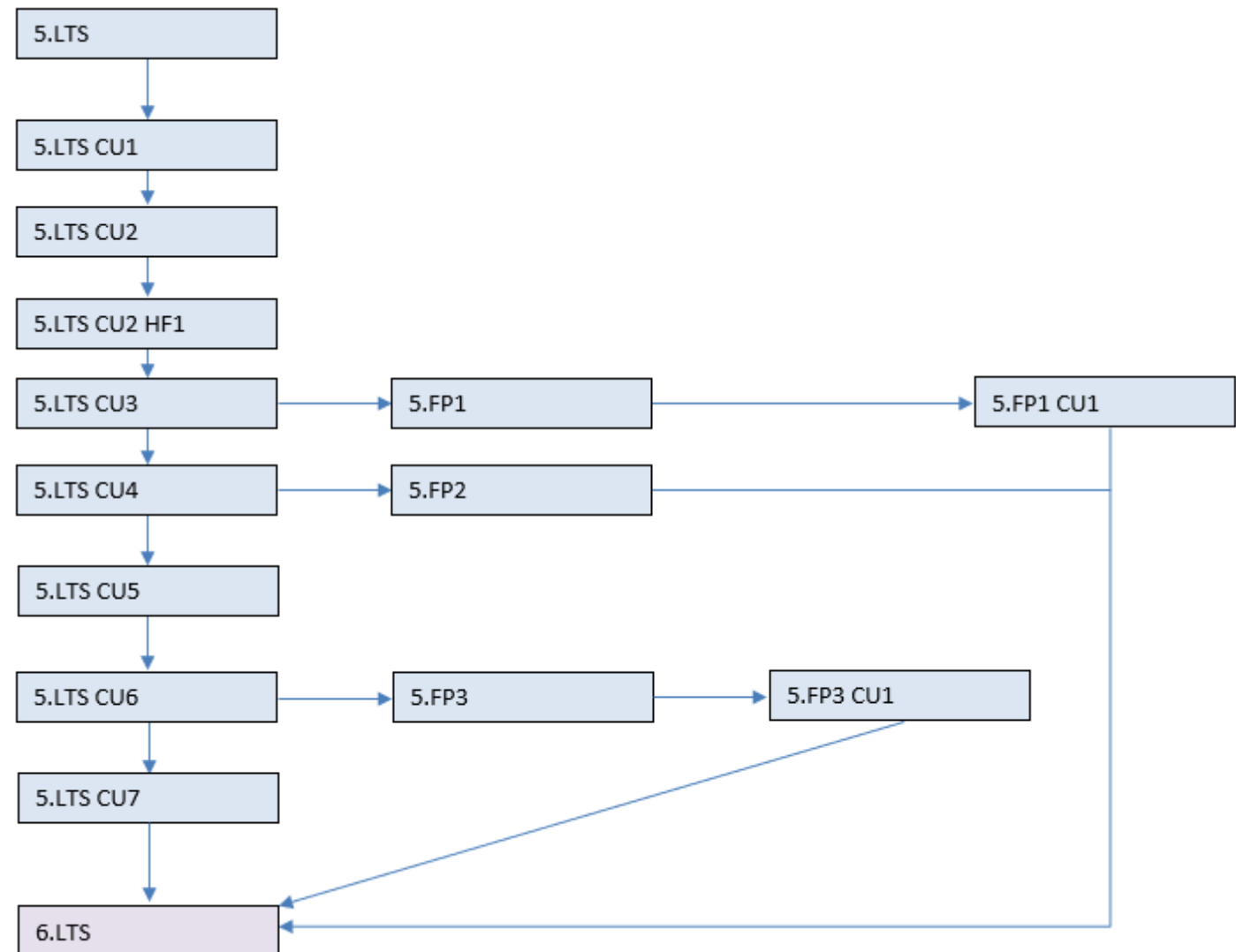
# Past Mimic Release Approach

- All releases were linear and always increasing
- Each release mixed feature additions, updates, and fixes
- This limited Emerson's flexibility to release new features early and to isolate fixes to current functions without new features you may not need



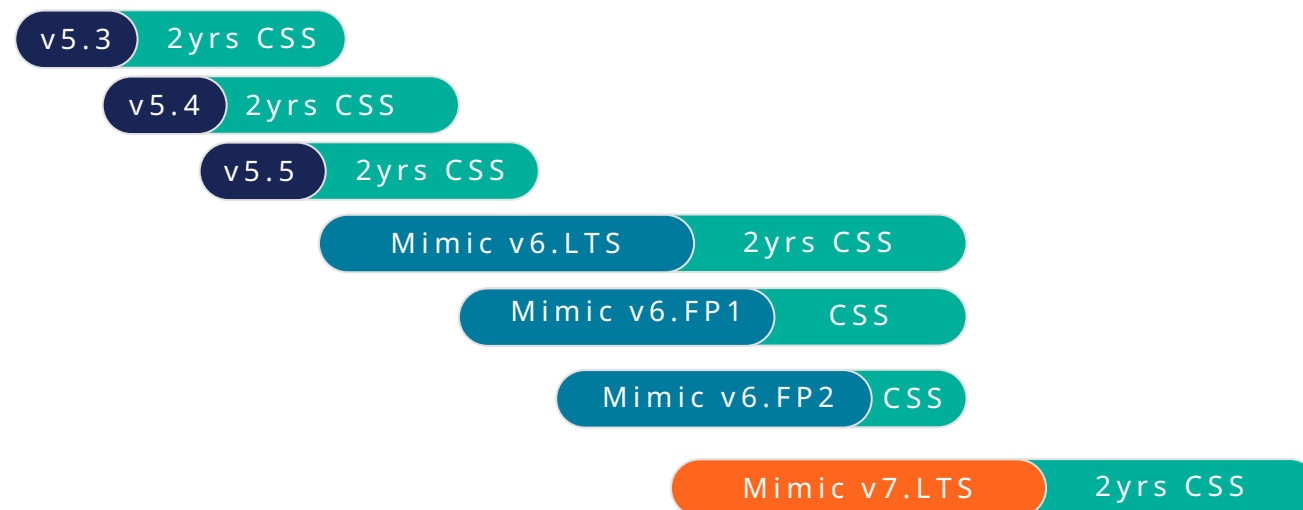
# New Long-Term Support (LTS), Feature Packs (FP), Cumulative Updates (CU) and Hotfixes (HF) Approach

- Mimic v6.LTS is the first LTS release and starts our new release approach
- The current LTS version and its latest CU will be the recommended version for new installations
- FP offer access to new features over an LTS version, but are recommended only for users needing that specific feature



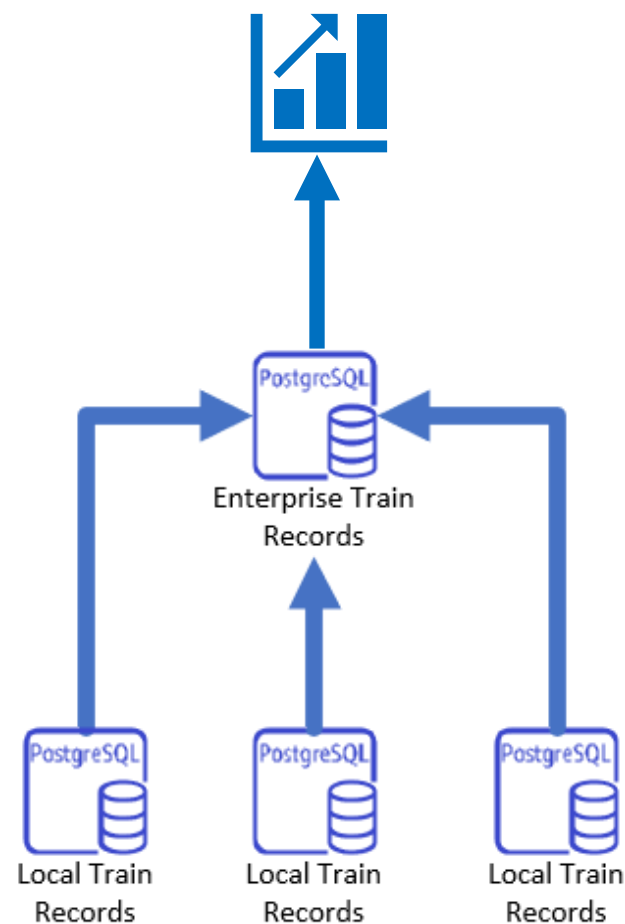
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# DeltaV Mimic: Train Enterprise

Enterprise Visibility of Training Records Across Different Sites and Regions



## Enterprise Visibility With Easily Accessible Data

- Enterprise visibility of all system utilization
- Track training progress across the enterprise for each location
- Compare training effectiveness across locations
- Identify top trainees and instructors to improve global learning and strategies
- Identify students and trainees that need additional support to achieve enterprise objectives
- Consume data in other business intelligence solutions and reports in the business level network or higher

# What's Coming in DeltaV Mimic

- Secure writes to DeltaV SIS
- FSU commute and consumption refinement
- OPC UA Support
- Synchronize for SIO Tags and improve tieback auto build
- Bioreactor updates and new life science objects
- Simulate batch snapshot coordination
- Security hardening
- AI Driven training
- AI Driven configuration



Mimic Applications

Navigation icons: Home, List, Heart, Add, Filter, More

- Training Analytics
  - Overview
  - Site Performance
  - Worst 10 Sites
  - Best 10 Sites
  - Usage Statistics
- System Health
  - License Usage
- Train
- Synchronize
- Test Bench
- Mimic Explorer
- Simulation Studio
- Mimic Diagnostics

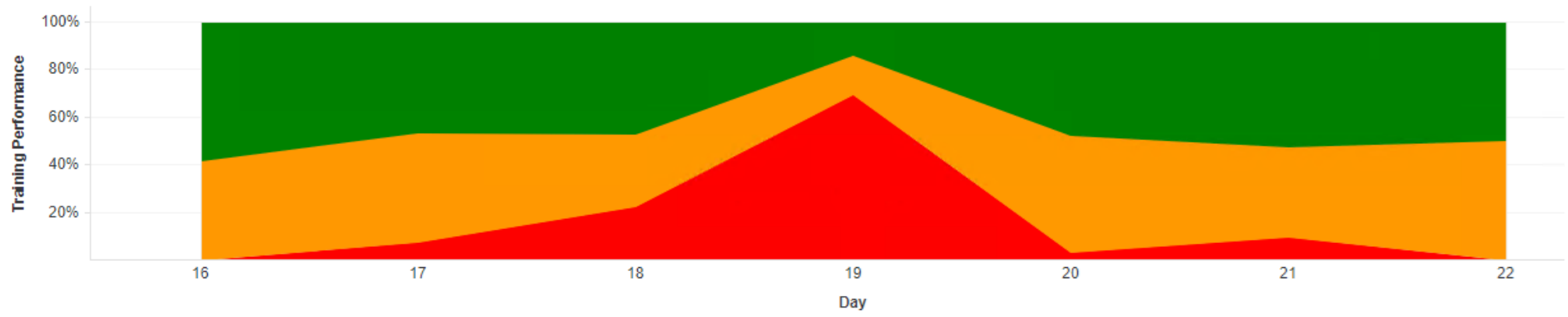
Monthly Weekly

Weekly : Overview

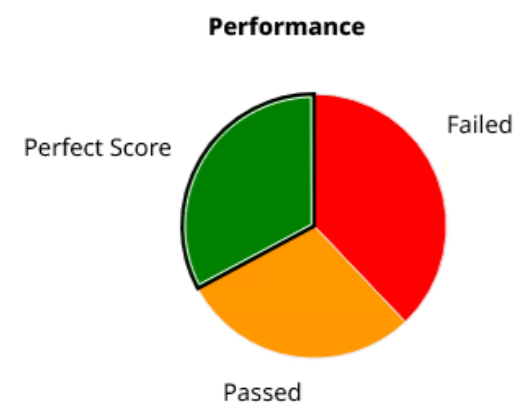


# User Training Performance

Data for: 2025 CW 12 (03/16 - 03/22)



Day	Failed	Passed	Perfect Score
16-Mar-2025	0	5	7
17-Mar-2025	7	43	44
18-Mar-2025	57	77	119
19-Mar-2025	340	80	69
20-Mar-2025	6	91	88
21-Mar-2025	6	24	33
22-Mar-2025	0	1	1



# Enterprise Operations Platform

VISION

Optimization  
Software

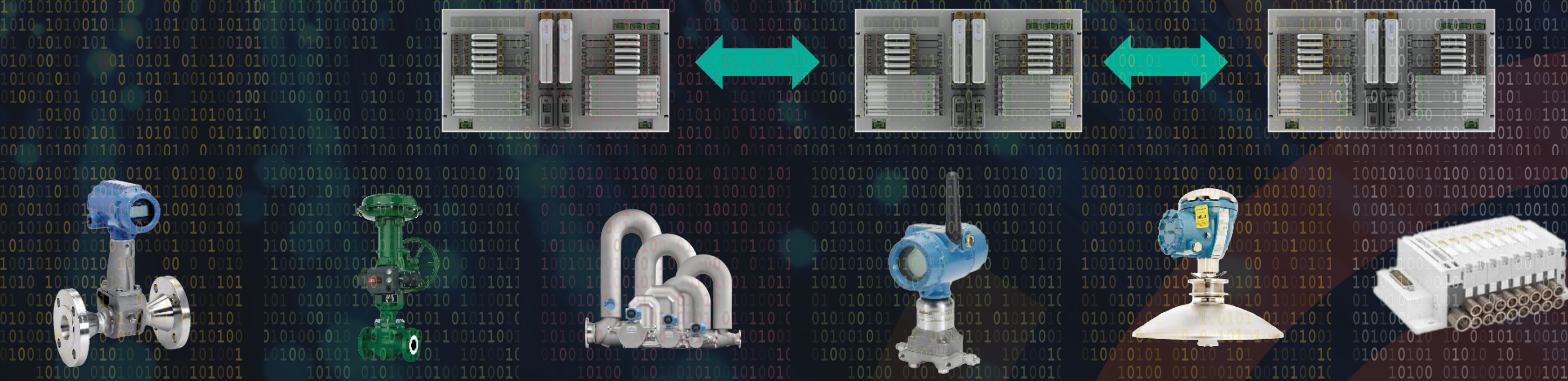


Control  
Systems &  
Software



INDUSTRIAL  
DATA FABRIC

Intelligent  
Field



# Exhibit #238 - Simulation

## Find More Information

[3-1862] Discover the Power of DeltaV Simulate

[www.Emerson.com/DeltaVMimic](http://www.Emerson.com/DeltaVMimic)

## Contacts

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# Thank You