

# Enhancing Surveillance and Culture with PI

Waterflood operational and engineering surveillance

Presented by: Marcus Coleman

Aera Energy LLC

- Oil and gas producer
- California based and operated
- Nearly 1,100 employees
- Produces approximately 25% of California's oil and gas
- OSIsoft EA customer since December 2014

“Our energy powers great todays and better tomorrows.”



# Our EA PI journey

- Started our PI journey in December 2014
- Built out PI infrastructure for 9 months
- Currently pulling ~1.1 million tags from all 6 locations
- ~30 active users (and growing), leveraging PI DataLink and/or PI Coresight (Vision) dashboards into our daily work activities



- Located in Kern County, California
- The Belridge Producing Complex covers an area roughly 22 miles long and 2.5 miles wide
- Produces nearly 80,000 barrels of oil equivalent per day
- Operating approximately 7,500 production wells and 5,000 injection completions

About Aera

**Belridge  
overview**

Operational  
surveillance  
application

Engineering  
surveillance  
application

Summary



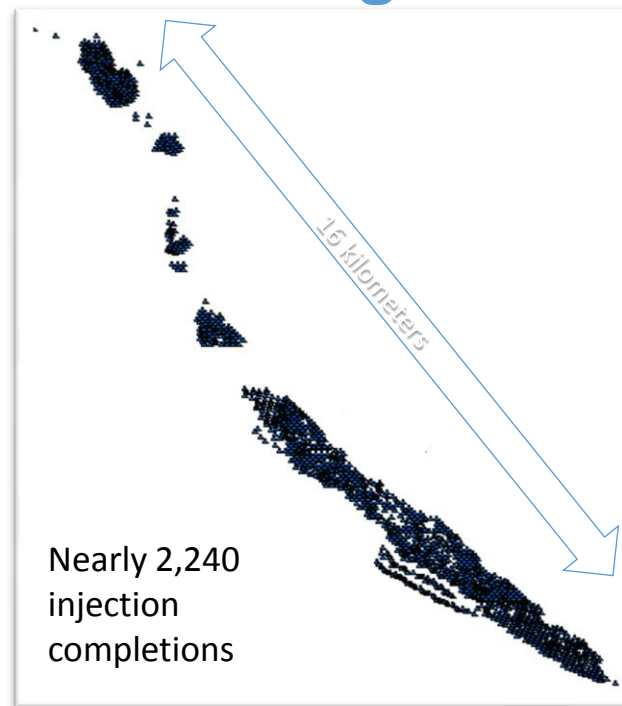
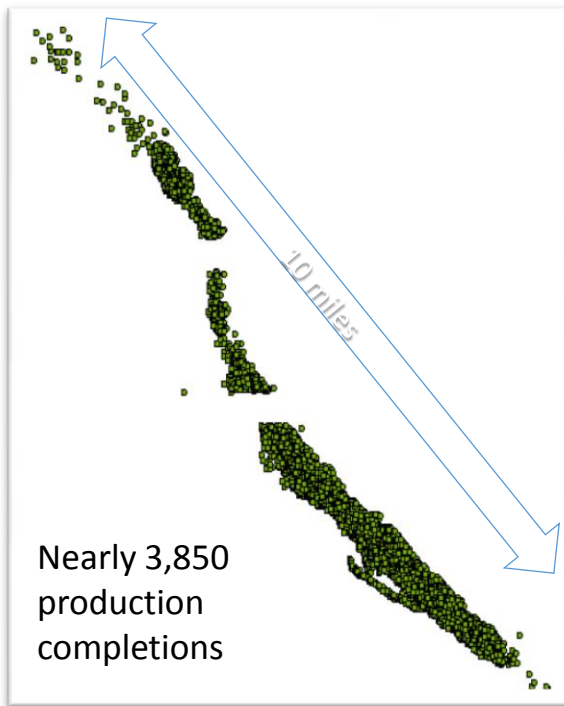
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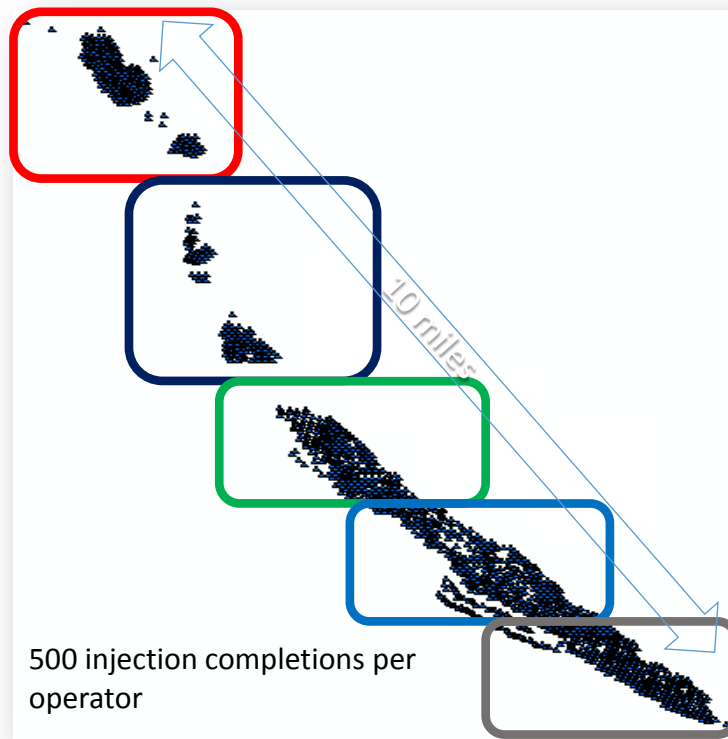
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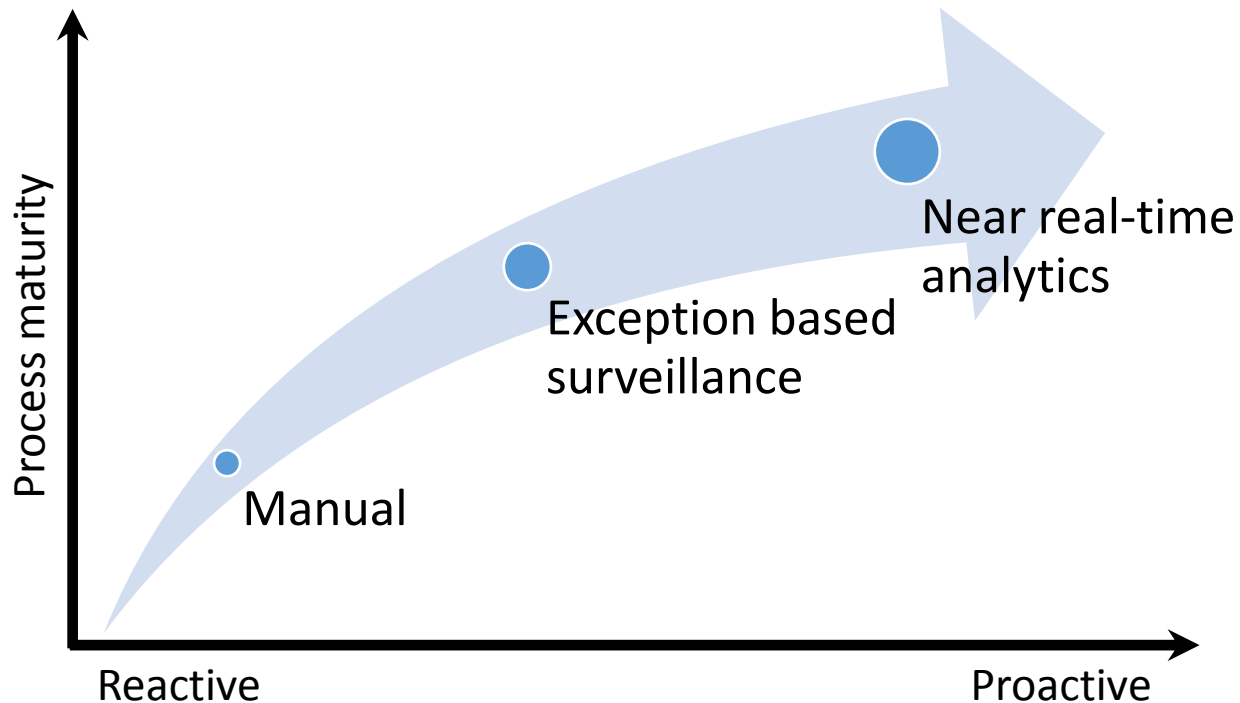
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- Flow meter fouling dashboards
- PID loop tuning analysis
- Failed surface controls alerts
- Measurement analytics tool suite
- Pipeline health dash boards

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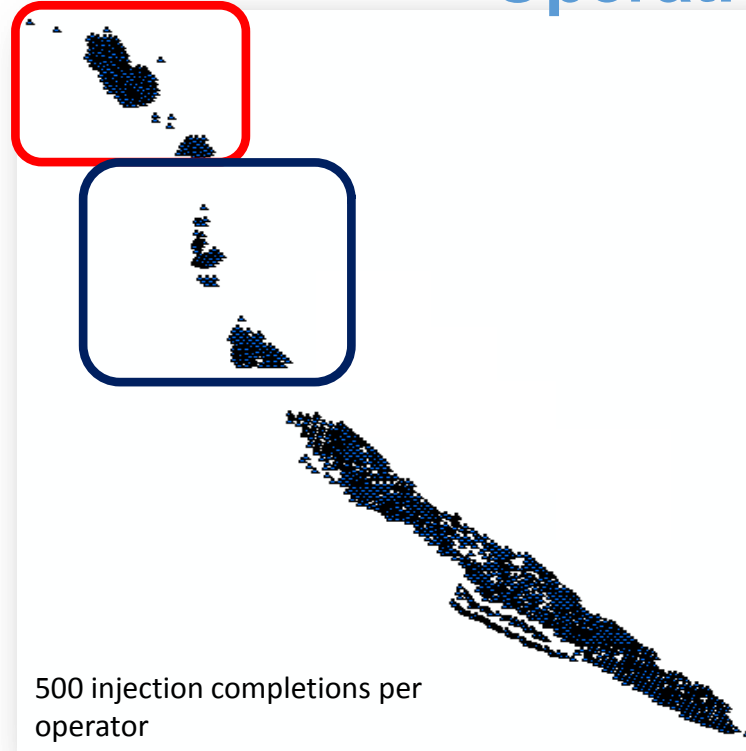
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# Operational surveillance



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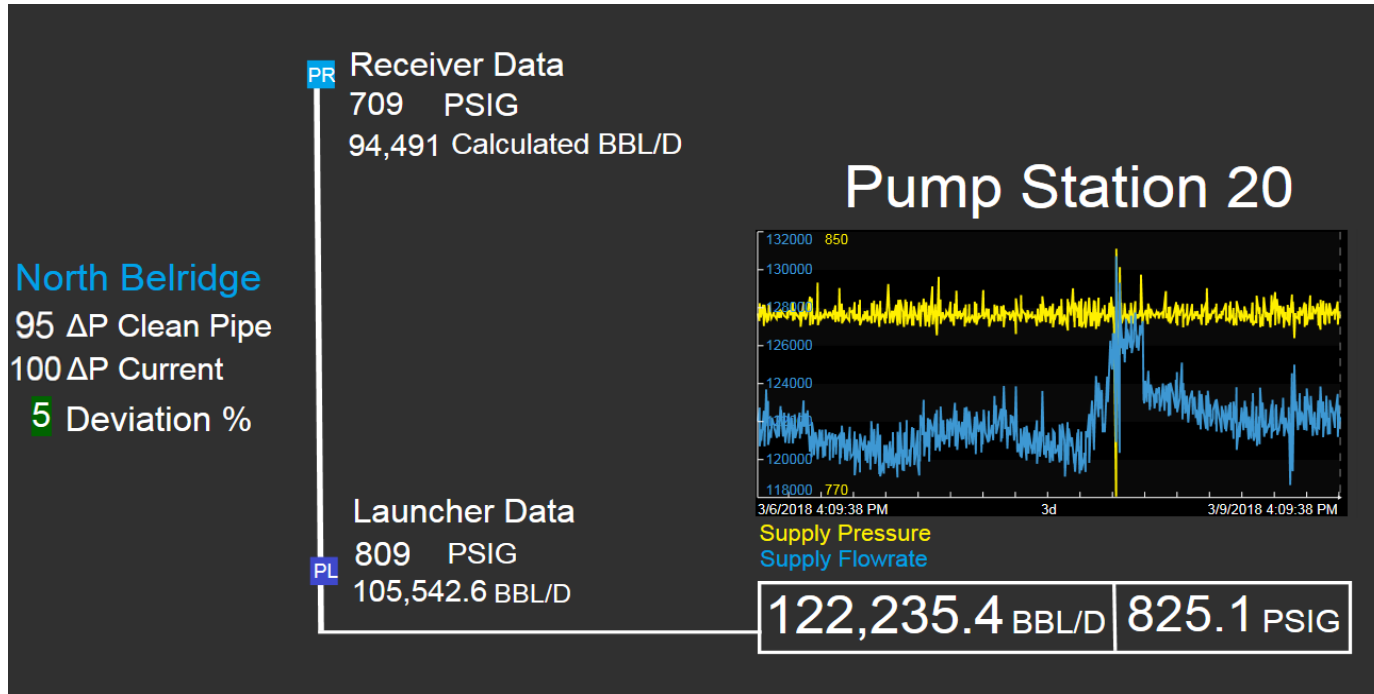
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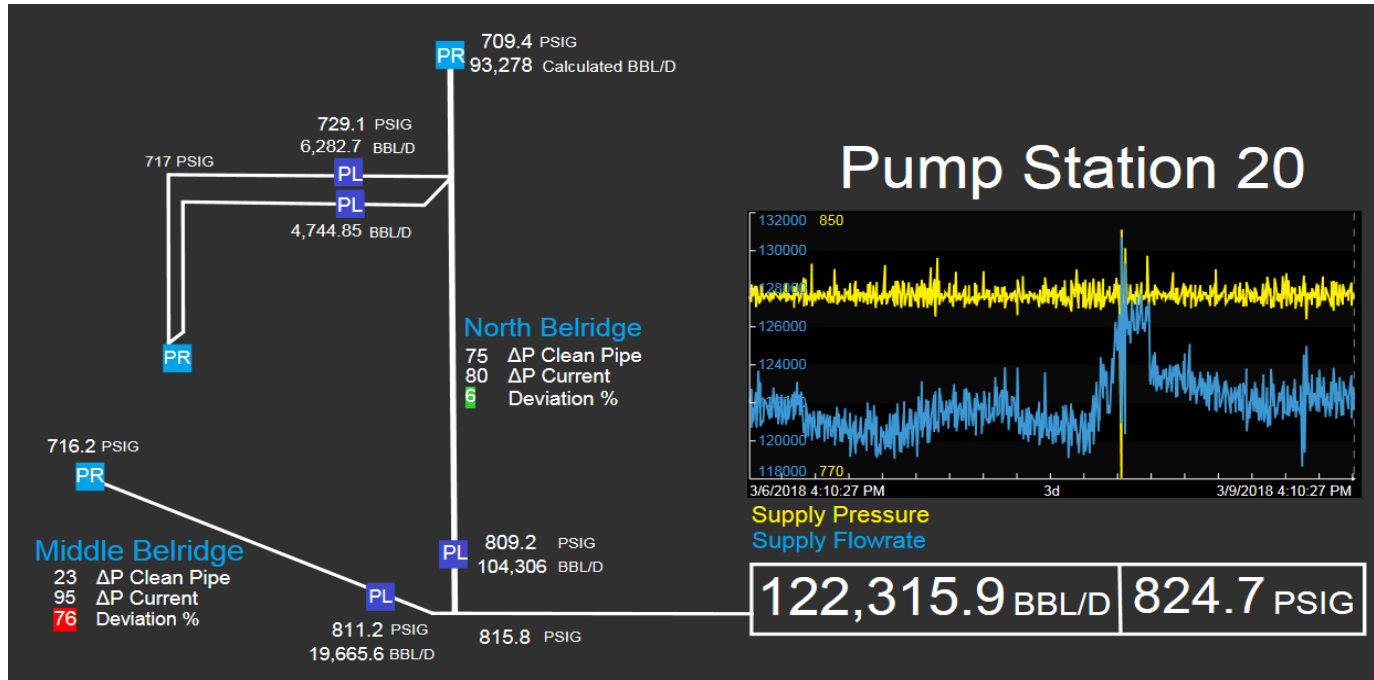
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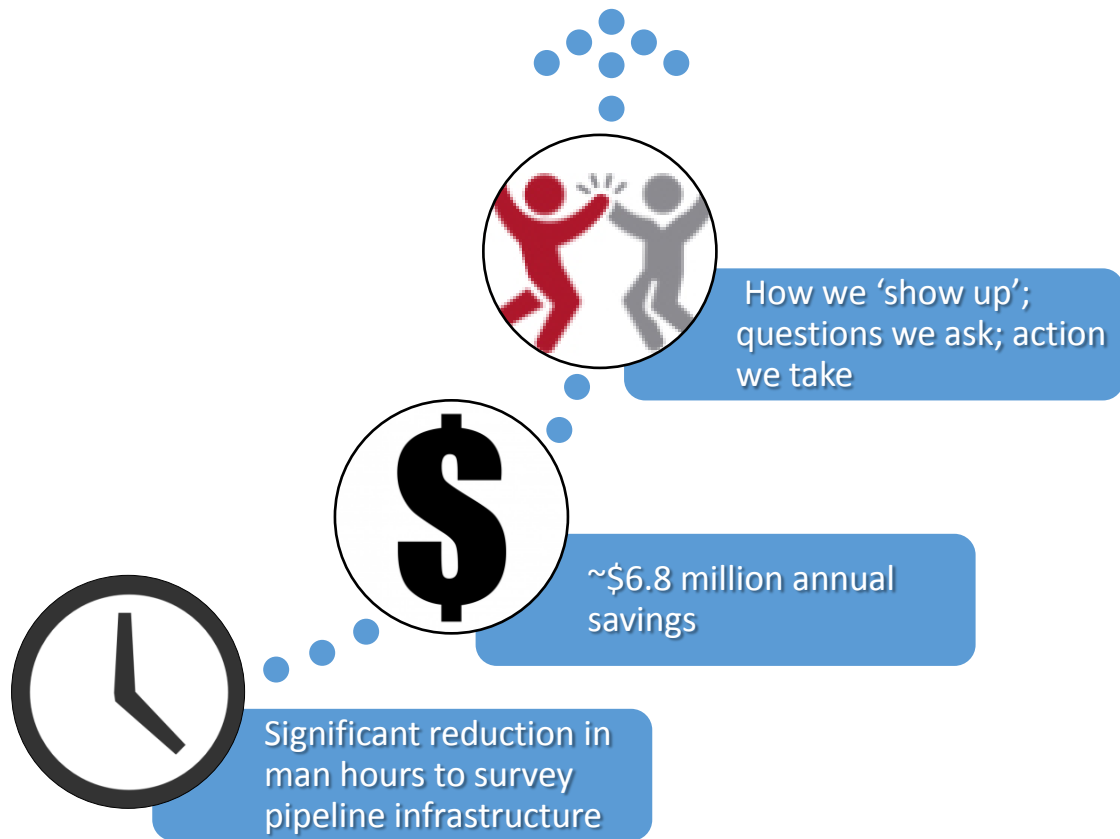
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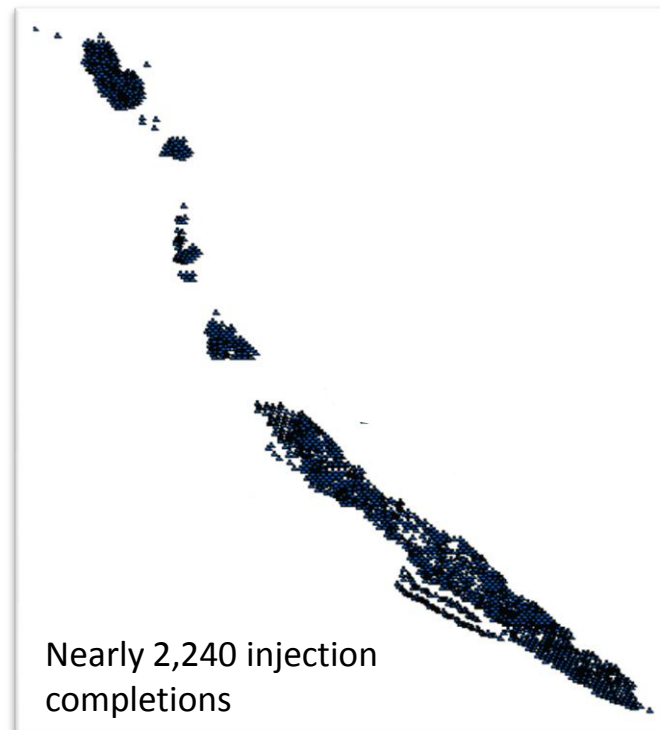
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# Operational surveillance - ROI





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- Wellbore integrity alerts
- Well interaction analysis
- Production allocation measurement dashboards
- Pressure transient analysis

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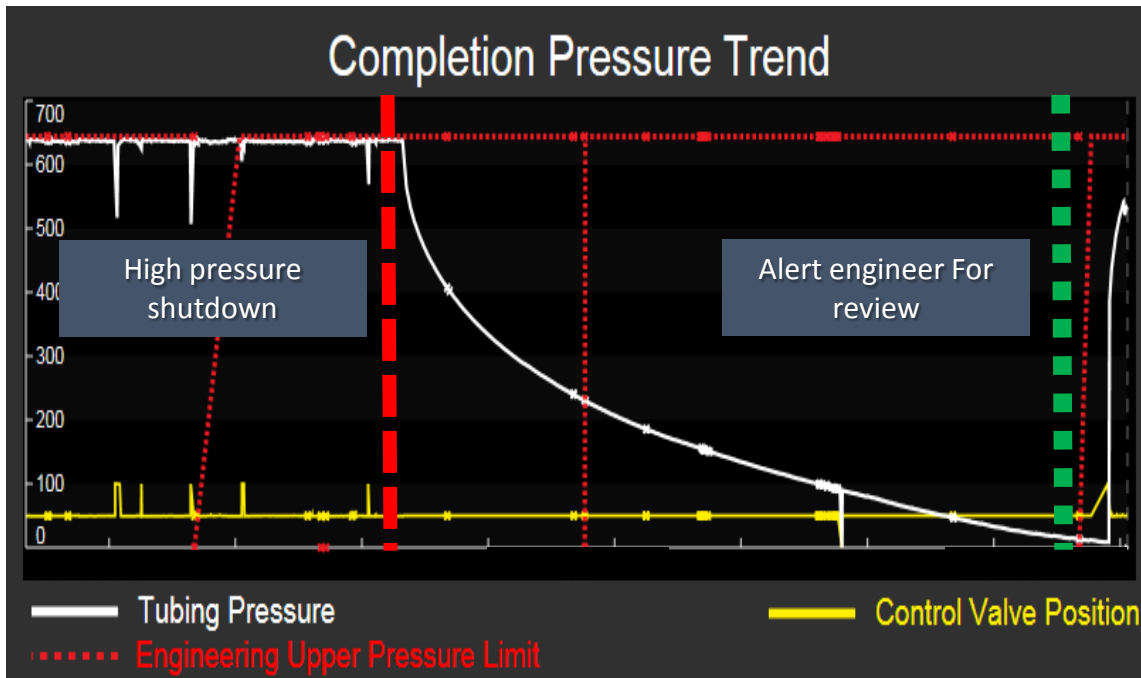
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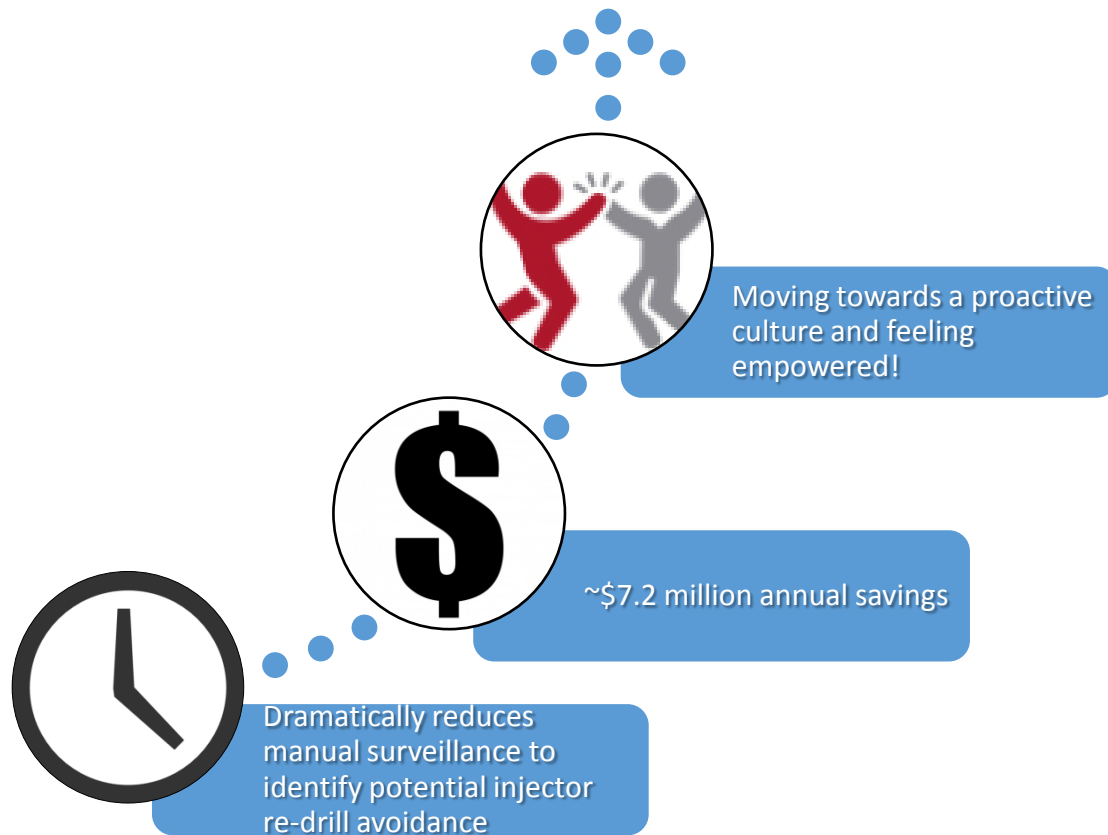
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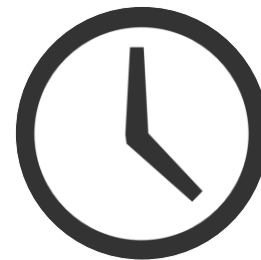
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# Engineering surveillance - ROI



- Time ROI

- Significant reduction in operator man hours to survey pipeline infrastructure
- Dramatic reduction in manual engineering surveillance to identify potential injector re-drill avoidance



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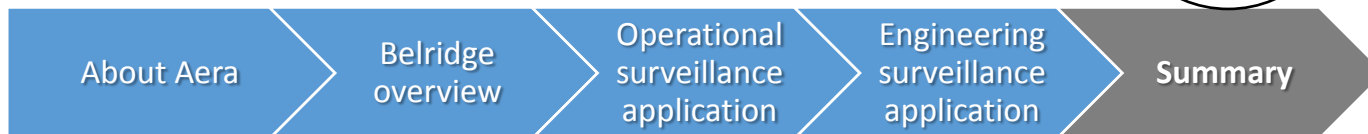
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- Financial ROI
  - Operational surveillance tool: ~\$6.8 million annual savings
  - Engineering surveillance tool: ~\$7.2 million annual savings
  - Combine impact: ~\$14 million annual savings



- Culture ROI
  - How we 'show up' is different
  - The questions we ask are different
  - The actions we take are different
  - Moving to a proactive culture
  - Staff feel empowered
  - Enabling mobility



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# Questions

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Merci

Danke

Gracias

Спасибо

감사합니다

# Thank You

ありがとう

Grazie

Obrigado