



Open for Innovation

**KNIME**

# How Tetra Pak Leverages KNIME To Drive Efficiency And Business Insights

KNIME Data Connect

25 Aug 2026

 **Tetra Pak<sup>®</sup>**  
PROTECTS WHAT'S GOOD



# Meet the Team



Sahil Sharma

- Senior Finance Analytics Expert
- Finance Operations



Pooja Katpale

- Data & Analytics Specialist
- Processing Solutions

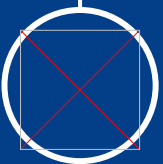


Dhanasri Naik

- Senior Finance Analytics Expert
- Finance Operations



# Agenda



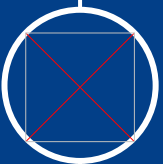
## 1. Tetra Pak's KNIME Ecosystem

- How KNIME fits for Business Users at Tetra Pak



## 2. Driving Value Across Manufacturing & Finance

- Manufacturing Use Cases with KNIME
- Financial Risk and Control with KNIME
- Forecasting & Budgeting with KNIME



## 3. How We Are Driving the Citizen Data Expert Community

- Building Self-Service Analytics Capabilities



# Agenda



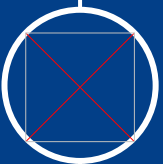
## 1. Tetra Pak's KNIME Ecosystem

- How KNIME fits for Business Users at Tetra Pak



## 2. Driving Value Across Manufacturing & Finance

- Manufacturing Use Cases with KNIME
- Financial Risk and Control with KNIME
- Forecasting & Budgeting with KNIME



## 3. How We Are Driving the Citizen Data Expert Community

- Building Self-Service Analytics Capabilities



## Who we are?

We are a world leading food processing and packaging solutions company.

Working closely with our customers and suppliers, we provide safe, innovative and environmentally sound products that each day meet the needs of hundreds of millions of people in more than 160 countries.



## Processing.

Solutions and equipment for dairy, plant-based, cheese, powder, ice cream, beverages and prepared food



## Services.

Helps you improve your performance, optimise costs and ensure food safety throughout the lifecycle of your operations

## Packaging.

A complete carton packaging range for consuming food products offering convenience, easy opening, optimal shelf life and the ability to give maximum brand exposure





## Our global organisation.

World-class expertise,  
everywhere





# Keeping up with data driven world

Bridging the gap between business users & data scientists at Tetra Pak

**Business user in Excel** □ **Bike**  
*Simple, limited but easy to manage.*



**Citizen Data Expert** □ **Electric bike**  
*More powerful than a bike  
Less maintenance than a motorcycle*



**Data Scientist with coding** □ **Heavy MC**  
*Complex, heavy maintenance but powerful*



**KNIME acts as the enabler**



# How KNIME Enables Business-Led Digital Innovation

Bridging the gap between business users & data scientists at Tetra Pak

## KNIME

No-Code / Low-Code  
Development

Easy to access

Reusable & Shareable Workflows



## Business Users

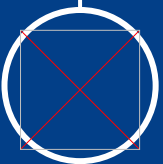
Domain Experts Become  
Solution Builders

Quick onboarding

Scalable Knowledge Capture



# Agenda



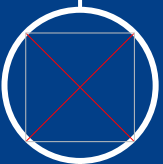
## 1. Tetra Pak's KNIME Ecosystem

- How KNIME fits for Business Users at Tetra Pak



## 2. Driving Value Across Manufacturing & Finance

- Manufacturing Use Cases with KNIME
- Financial Risk and Control with KNIME
- Forecasting & Budgeting with KNIME

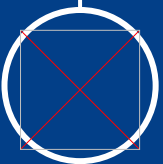


## 3. How We Are Driving the Citizen Data Expert Community

- Building Self-Service Analytics Capabilities



# Agenda



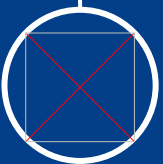
## 1. Tetra Pak's KNIME Ecosystem

- How KNIME fits for Business Users at Tetra Pak



## 2. Driving Value Across Manufacturing & Finance

- Manufacturing Use Cases with KNIME
- Financial Risk and Control with KNIME
- Forecasting & Budgeting with KNIME



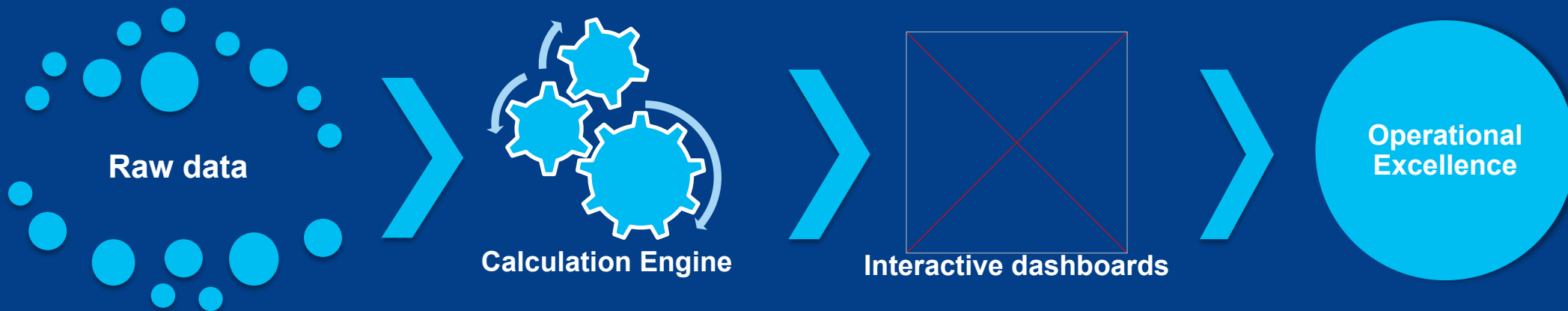
## 3. How We Are Driving the Citizen Data Expert Community

- Building Self-Service Analytics Capabilities



## Unlocking Manufacturing Performance Through Advanced Analytics

Developed an internal analytics application that dynamically integrates operational data from multiple sources, performs advanced engineering calculations, and provides interactive visualizations to support process performance monitoring and decision-making.





# Process Performance Analytics tool

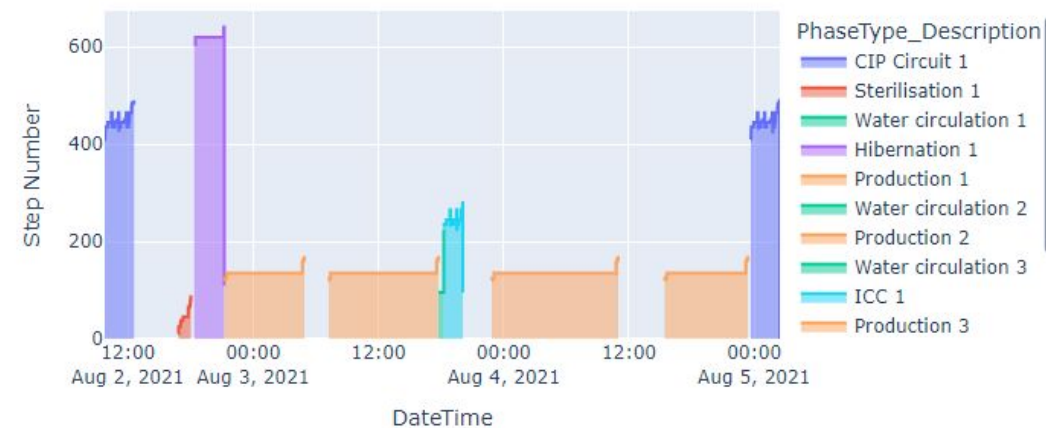
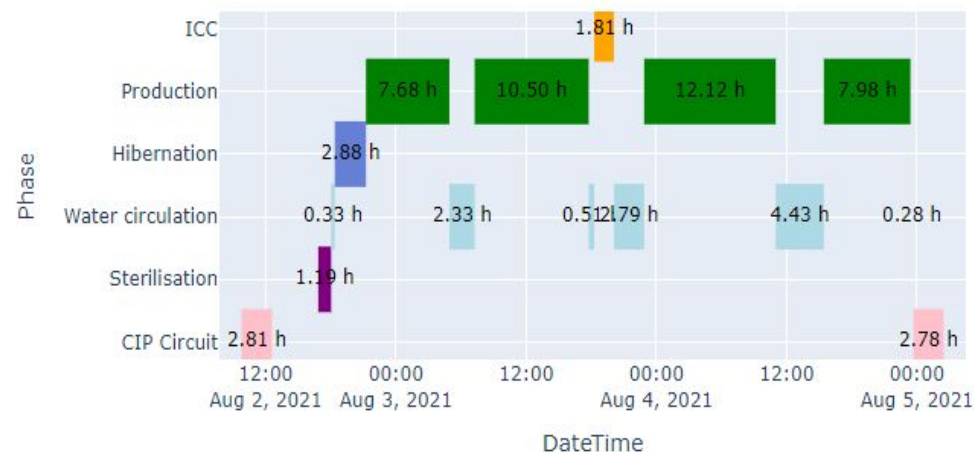
Fun Fact –The application consisted of ~ 4000 nodes.

- OEE (Overall Equipment Effectiveness)
- Equipment Availability (%)

- Equipment Run/Idle/Stop Status
- Unplanned Shutdowns

- Throughput (Units/hour)
- Yield (%)

- Total Energy Consumption (kWh)
- Energy cost per unit



The image shown displays sample data and is intended for demonstration purposes.



# KNIME Capabilities Utilized

## Workflow Automation

- Flow Variables
- Refresh Buttons & Switch Case.
- Meta Nodes.
- Scheduling & Parameterization.
- Data Blending

## Analytics & AI

- Machine Learning Extensions.
- Model Validation.
- Python Integration.
- Statistical Analysis.
- Predictive Analytics Models.

## Application Development

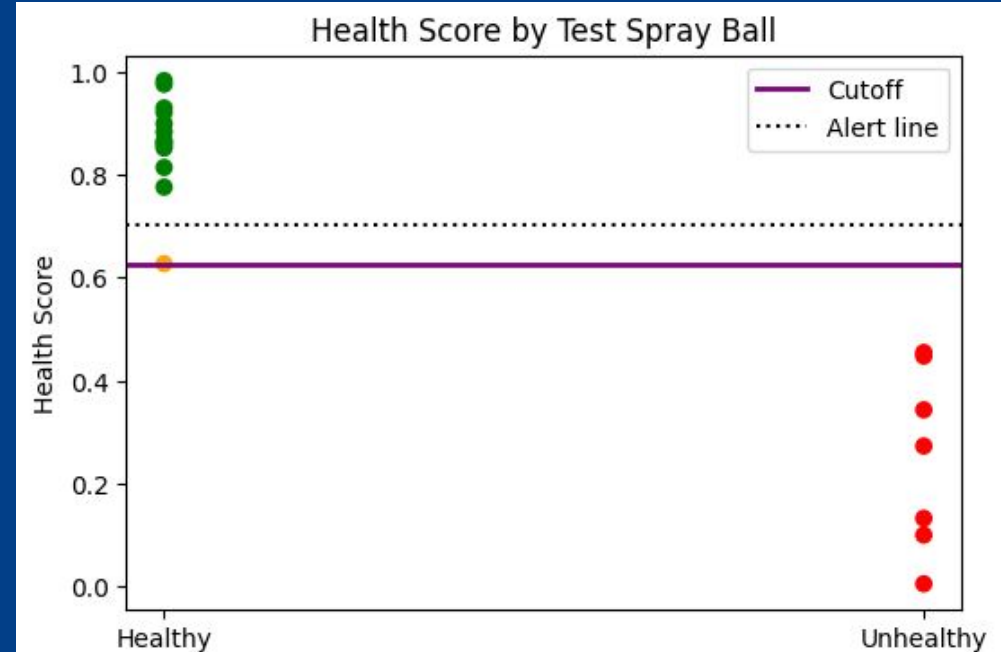
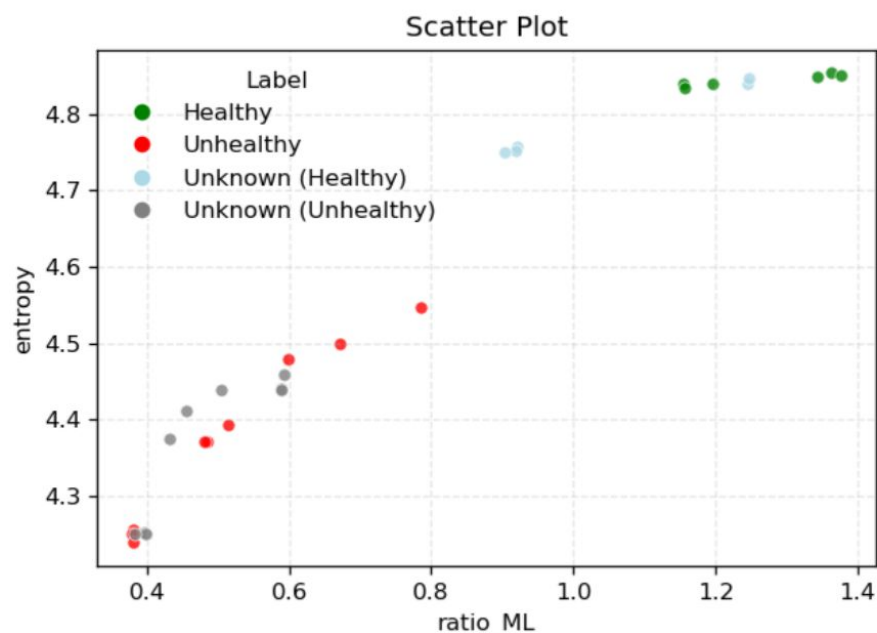
- Component-Based Applications.
- Interactive Views & Dashboards.
- Web Portal Deployments.
- Self-Service Analytics



# Condition monitoring Solution for Improved Equipment Reliability



- ▶ KNIME proof of concept; health score
- ▶ Operational Deployment



Enabled early detection of equipment performance issues through non-intrusive monitoring.

KNIME reduced R&D PoC timelines by **50%**, enabling **2x** faster delivery.



# Financial Risk & Controls Monitoring

## From Sample Testing to Continuous Risk Monitoring

### Challenges

- ❌ Large data volumes
- ❌ Manual reviews
- ❌ Delayed risk detection
- ❌ Limited visibility

### KNIME ENABLES

- ❌ Workflow Automation
- ❌ Full-Population Analysis
- ❌ Anomaly Detection
- ❌ Explainable Insights

### Business Impact

- ✅ Enhanced risk coverage  
~4,000 invoices reviewed monthly
- ✅ Faster reviews  
40% reduction in time for Open Item review
- ✅ Stronger compliance
- ✅ Greater control assurance

Traditional controls

Broader coverage • Earlier detection • Stronger assurance

Data-driven controls



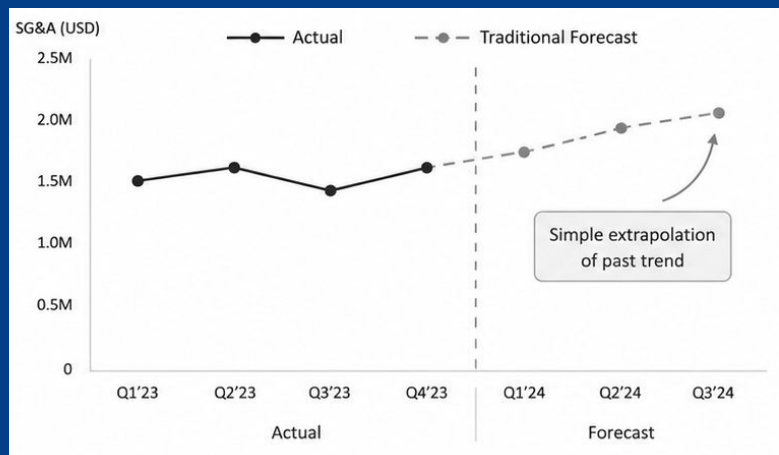
# Forecasting & Budgeting

## From Traditional Forecasting to Data-Driven Forecasting

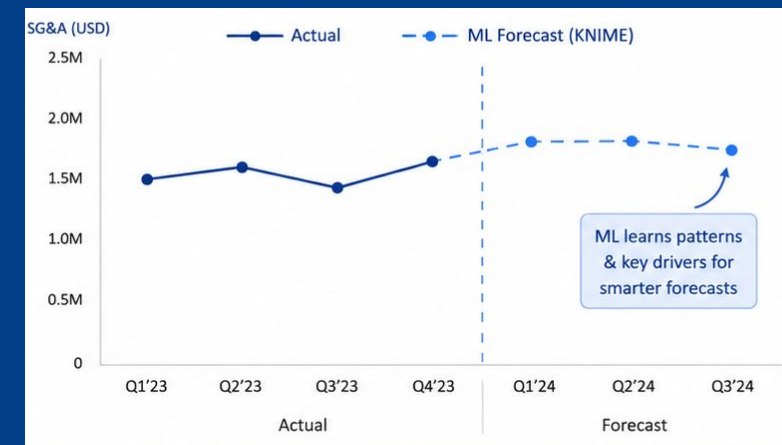
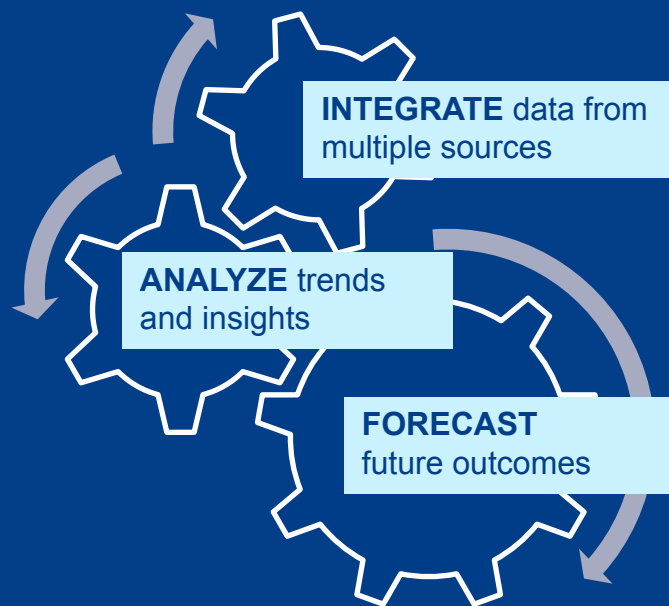
Traditional Forecast

KNIME-powered forecasting

Data-driven Forecast



- Heavily relied on human judgement
- Manual trend extrapolation
- Data fragmented across multiple sources

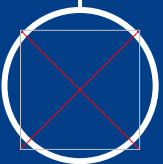


- ✓ Better Visibility
- ✓ Earlier Identification Of Trends
- ✓ Understand What Is Driving The Forecast
- ✓ More consistent forecasting process

60% lower forecast preparation effort, ~5% better than traditional forecast performance



# Agenda



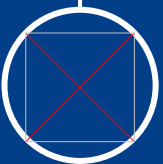
## 1. Tetra Pak's KNIME Ecosystem

- How KNIME fits for Business Users at Tetra Pak



## 2. Driving Value Across Manufacturing & Finance

- Manufacturing Use Cases with KNIME
- Financial Risk and Control with KNIME
- Forecasting & Budgeting with KNIME

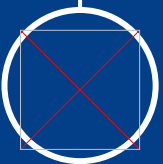


## 3. How We Are Driving the Citizen Data Expert Community

- Building Self-Service Analytics Capabilities



# Agenda



## 1. Tetra Pak's KNIME Ecosystem

- How KNIME fits for Business Users at Tetra Pak



## 2. Driving Value Across Manufacturing & Finance

- Manufacturing Use Cases with KNIME
- Financial Risk and Control with KNIME
- Forecasting & Budgeting with KNIME



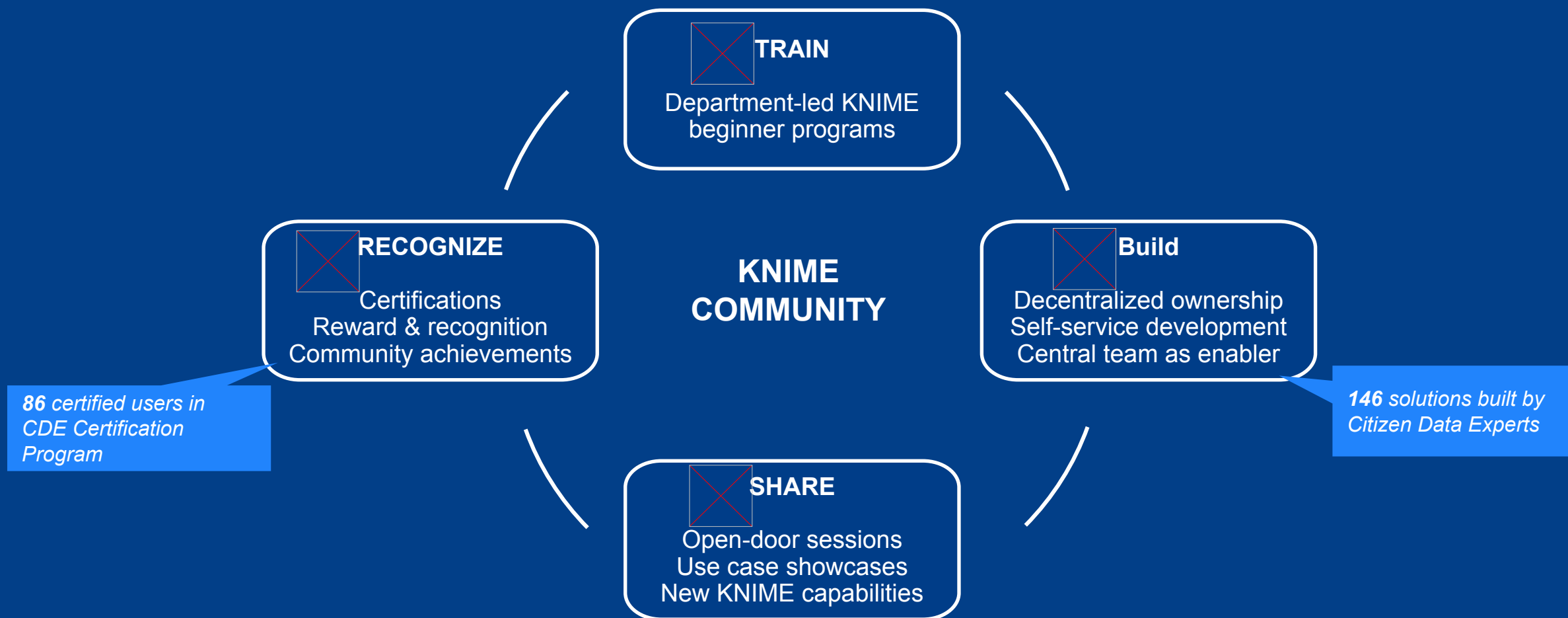
## 3. How We Are Driving the Citizen Data Expert Community

- Building Self-Service Analytics Capabilities



# How We Are Driving The Community

Empowering domain experts to create, share and own KNIME solutions



Our goal is not just to build KNIME workflows, but to build a community of domain experts who create and own analytics solutions.

