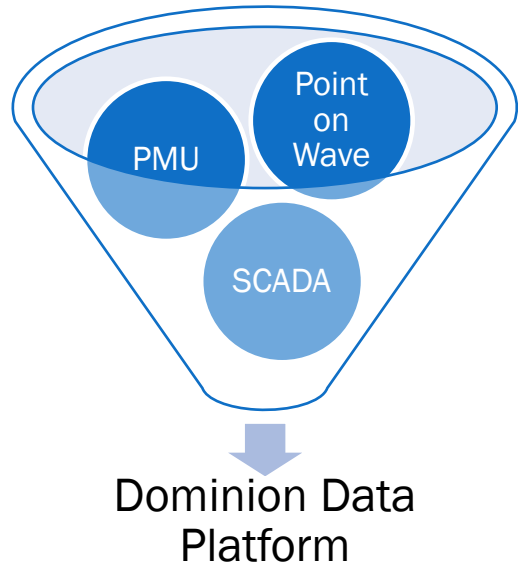# EPG AND UCR SOLUTION: AUTOMATED GRID PERFORMANCE ASSESSMENT

Assess Power System Dynamics using High-Resolution Data

Neeraj Nayak, EPG

Dr. Nanpeng Yu, UCR

Dr. Koji Yamashita, UCR

Point on Wave

PMU

SCADA

Dominion Data Platform

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Identify — Identify natural system modes and forced oscillations and assess characteristics

Classify — Classify oscillations – forced (controllers, equipment, etc.) or natural

Locate — Identify source of forced oscillation events

Assess — Assess and identify IBR performance issues related to impact on grid reliability (including local/inter-area oscillations)

Address — Assess data quality and address data quality issues surfaced with dynamics performance assessment using machine learning and AI techniques

Report — Automatically generate a report with results from the above series of analysis

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Data Source

Automated Data Analysis Process for Grid Dynamics Assessment (Oscillations and IBRs)

Comprehensive Reports Automatically Generated with Engineering Analysis and Key Findings

Electric Power Group

AMERICAN-MADE U.S. DOE DIGITIZING UTILITIES PRIZE

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