



**Consolidating and Upgrading
Two Refineries to Maximo 7.6
Using a Re-implementation Approach**

October 8, 2015

Agenda



About CVR Energy (Pratt)

Background and Current State (Pratt)

Current Issues (Pratt)

Goals (Pratt)

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Approach (Vanderham)

Next Steps (Pratt)

Q&A



About CVR Energy



CVR Energy, Inc. is a diversified holding company primarily engaged in the petroleum refining and nitrogen fertilizer manufacturing industries through its holdings in two limited partnerships, CVR Refining, LP and CVR Partners, LP. Due to acquisitions, multiple Maximo instances are in use today at CVR Energy, including one for each of CVR Refining's two crude oil refineries. This presentation describes the project to consolidate supply-chain business processes through the upgrade to Maximo 7.6. The goal was to effectively "*replace Maximo with Maximo*," while improving the operating system and the business processes related to maintenance and reliability.

About CVR Energy



- **Oil Refineries**

- Coffeyville Resources Refining & Marketing, LLC
 - Coffeyville, Kansas
 - Rated capacity of 115,000 barrels per calendar day
- Wynnewood Refining Company, LLC
 - Wynnewood, Oklahoma
 - Rated capacity of 70,000 barrels per calendar day

- **Nitrogen Fertilizer Operations**

- Coffeyville Resources Nitrogen Fertilizers, LLC
 - Coffeyville, Kansas
 - Uses state-of-the-art technology to produce ammonia and urea ammonium nitrate (UAN)

- **Other Subsidiaries**

- Approximately 335 miles of active and owned pipelines
- Approximately 150 crude oil transports
- More than 6 million barrels of owned and leased crude oil storage capacity

Background and Current State



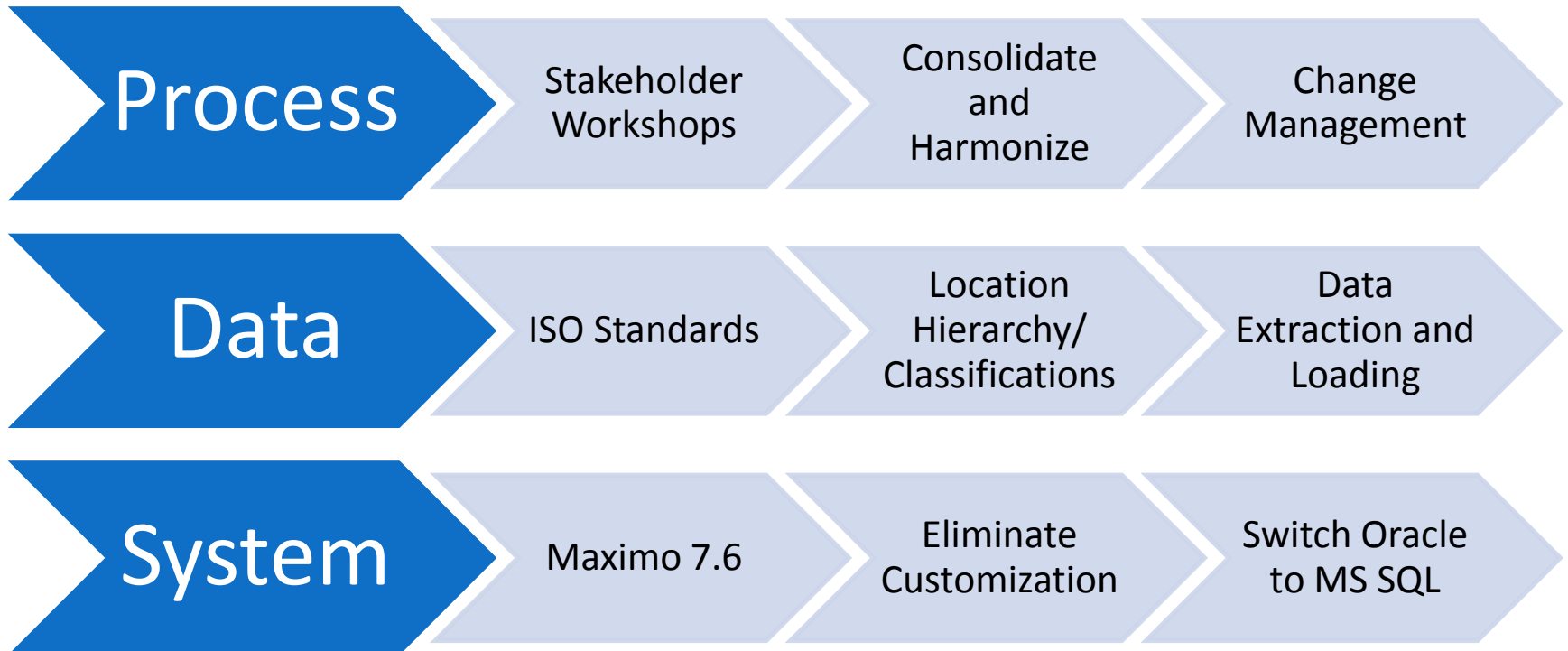
- **Coffeyville Refinery**
 - Launched Maximo Series 3 in 1993
 - Numerous upgrades over the years
 - Migrated to 6.2.4 in 2009
 - Numerous customizations (Cost Management/Quickpick)
 - Point to Point integration
- **Wynnewood Refinery**
 - Acquired in 2012
 - Maintenance management via JD Edwards
 - Migrated to a new Maximo 6.2.4 instance
 - Copying the structure and hierarchy of Coffeyville refinery
 - Numerous customizations (Cost Management/Quickpick)
 - Point-to-point integration
- **Nitrogen Fertilizer Operations**
- **Gathering Operations**
 - Similar growth path of Coffeyville refinery
 - Currently on 6.2.4

Issues and Goals



- **Align business process**
 - Fix – Two Refineries = Two Processes
 - Critical to agree on single set of rules for single refining instance
 - Document best-of-breed maintenance management and procurement work flows
- **Deploy new Maximo**
 - Roll-out one business unit at a time
 - No “upgrade” – replace Maximo with Maximo
 - Stand up new Refining Maximo 7.6 at Wynnewood Refinery
 - Model new business rules and process
 - Integrate Maximo for Oil and Gas industry solution
 - No customization
 - Ease of maintenance
 - Improved integration (leverage MIF, remove point-to-point direct table inserts)

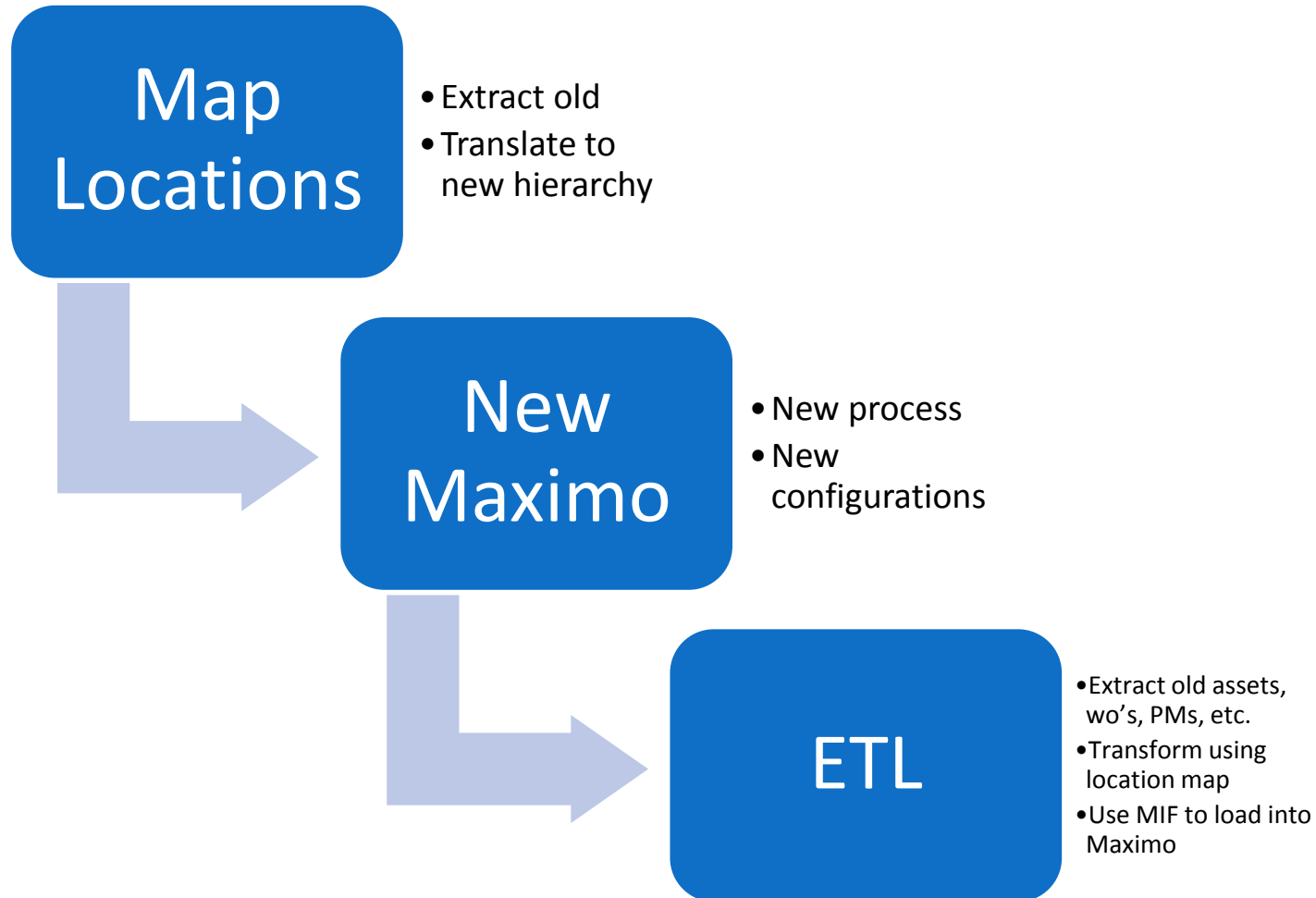
Objectives



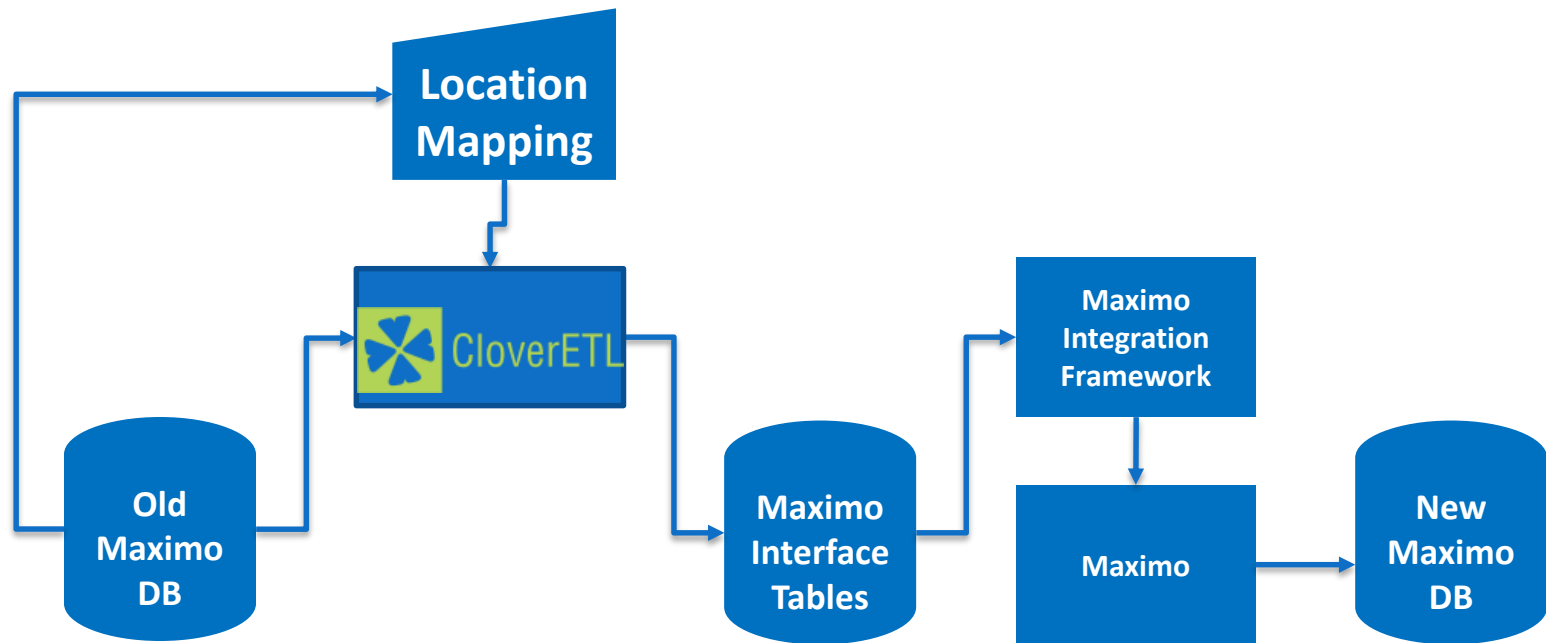
- **Start with “blank,” out-of-box Maximo 7.6**
- **Conduct process workshops with key stakeholders, covering:**
 - Enterprise hierarchy and data naming conventions
 - Work management, from work initiation through closure
 - Procure to Pay, from PR through invoice
 - Integration workshops to cover third-party system integration
 - Harmonize processes across both refineries

- **Configure Maximo 7.6**
 - Standardized location hierarchy, classifications, statuses, work priorities, etc.
 - Standardized Start Centers by job role
 - “No customization” mandate
 - Load clean data using Extraction, Transformation and Loading (ETL), leveraging the Maximo integration framework for writing to Maximo
 - Build integration points using Maximo integration framework
- **Starting at early stages, use conference room pilots to test the system and streamline business process changes**

Approach – Data Migration



Approach – Maximo ETL



ETL Benefits:

- Repeatable
- Scalable
- Automated
- Separation of logic from data

MIF Benefits:

- Data integrity
- Enforcement of Maximo logic
- No version dependencies

Iterative Solution



- **Coffeyville Refinery**
 - Follow with similar data migration onto the new 7.6 instance
- **Gathering Operations**
 - Stand up new Maximo 7.6 with transportation module
 - Business process reengineering
 - Data migration

Next Steps



- **Coffeyville Refinery**
 - 2016 – Migrate data to the new refining instance
 - Train users on new process and tool
- **Archive existing data for historical and reporting purposes**
- **Review Reporting Requirements**
 - Migration to BIRT
- **Nitrogen Fertilizer Operations**
 - Improve existing business process
 - 2017 – Stand up stand-alone instance of 7.6
- **Gathering Operations**
 - Improve existing business process
 - 2017 – Stand up stand-alone instance of 7.6 with Maximo for transportation industry solution

Thank you.