



Next Gen Pharma - Optimizing the Pharma Value Chain with AI, Advanced Analytics, and LIMS Integration

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Disruption is all around us. Is your organization ready to adapt?

\$3.05
bn.
The estimated size of the pharma AI market in **2024**

42.7%
Projected **CAGR** of the pharma AI market from **2024** to **2029**

\$254
bn.
of additional annual operating profit that can be potentially gained by pharma companies worldwide by **2030**, assuming a high degree of industrialization of the AI use cases

Leading pharmaceutical companies across the globe are embracing the power of Artificial Intelligence to explore new growth avenues

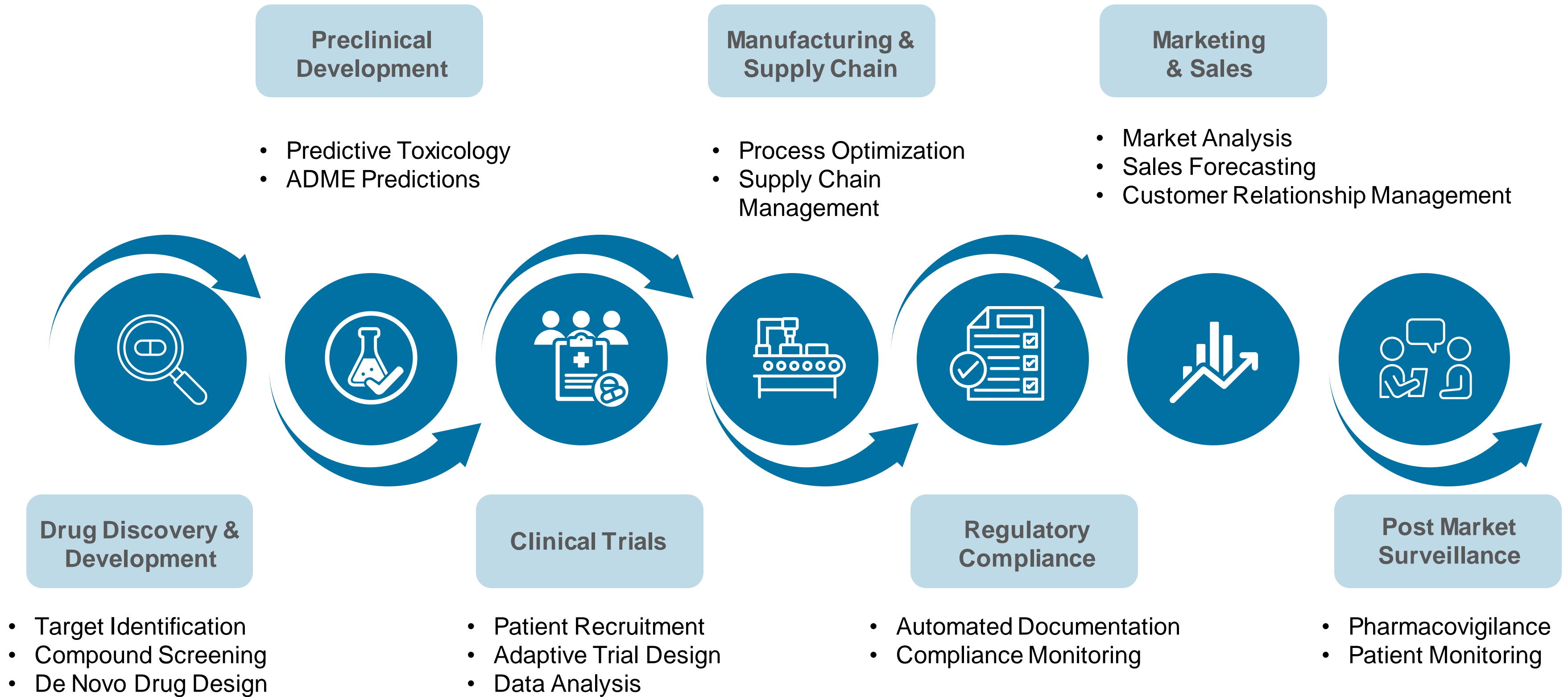


The image displays the logos of five major pharmaceutical companies: Pfizer (blue oval), GSK (orange/red shield), Sanofi (black text with purple dot), Novartis (orange and blue flame-like shape), and AstraZeneca (purple text with yellow DNA helix).

1. <https://www.mordorintelligence.com/industry-reports/artificial-intelligence-in-pharmaceutical-market>
2. Strategy&: Re-inventing Pharma with Artificial Intelligence



AI is Permeating Every Pillar of the Pharma Value Chain



The Benefits of Using AI-based Techniques in the Pharma

Improve accuracy
& quality assurance



Improved accuracy
& precision
Improved compliance
& documentation

Boost efficiency
& operational
performance



Predictive maintenance
& reduced downtime
Cost-saving

Enhance data-driven
insights



Big data integration
Inform decision making

Drive scientific
innovation



Continuous improvement
Competitive advantages



R&D Space Undergoing a Paradigm Shift Under AI-Based Techniques



The introduction of AI-based tools and utilities into the R&D and pre-clinical stages can drastically **reduce the drug development cycle and drive innovation in the discovery**



Predictive Formulation



PK/PD Modelling



Drug Dosage Optimization



Gen-AI based Medical Writing



Accelerating Clinical Trials Through AI Interventions

Optimal site selection



- What are the “best “ sites to be chosen for my trial?
- How do I recommend the selection of the new sites?

Benefits:

Improved trial timelines & reduced site related costs, presenting key opportunities for accelerating clinical trials.

Risk based monitoring

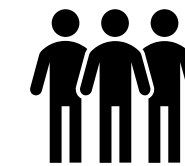


- Are the sites compliant? What is the risk?
- How often do I monitor each site?
- How do I reduce monitoring costs?

Benefits:

Cost optimization through resource rationalization over time without compromising on safety, efficacy etc.

Optimal CRA allocation



- How do I assign CRAs to sites to drive down costs?

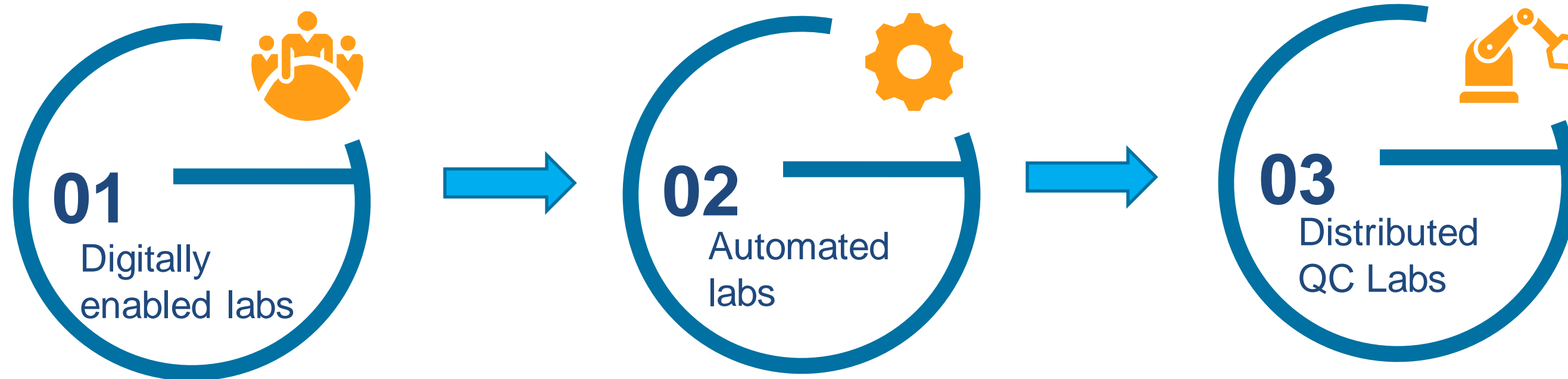
Benefits:

optimum assignment of resources leading to cost reduction.



Smart Quality: Evolution of the Digital Lab

AI has truly disrupted manufacturing quality control by leading to the evolution of digital quality labs. At these sites, nearly all routine product testing would take place on the production line, enabling real-time release testing (RTRT)



Key building blocks needed to transition to an AI-enabled setup

Semantic Search

AI Platform

SDMS

Scientific Data Lake

LIMS

Integration



We believe that cloud computing provides the perfect foundation for this vision:

One scalable platform that addresses all your data, process, and capability challenges.

How LabVantage Is Working Towards Building the Next-Gen Infra for Our Clients



Good decisions require good information

Review & Design

Analysis

Experiment

Plan & Design



Semantic Search (AILANI)



Automate LIMS



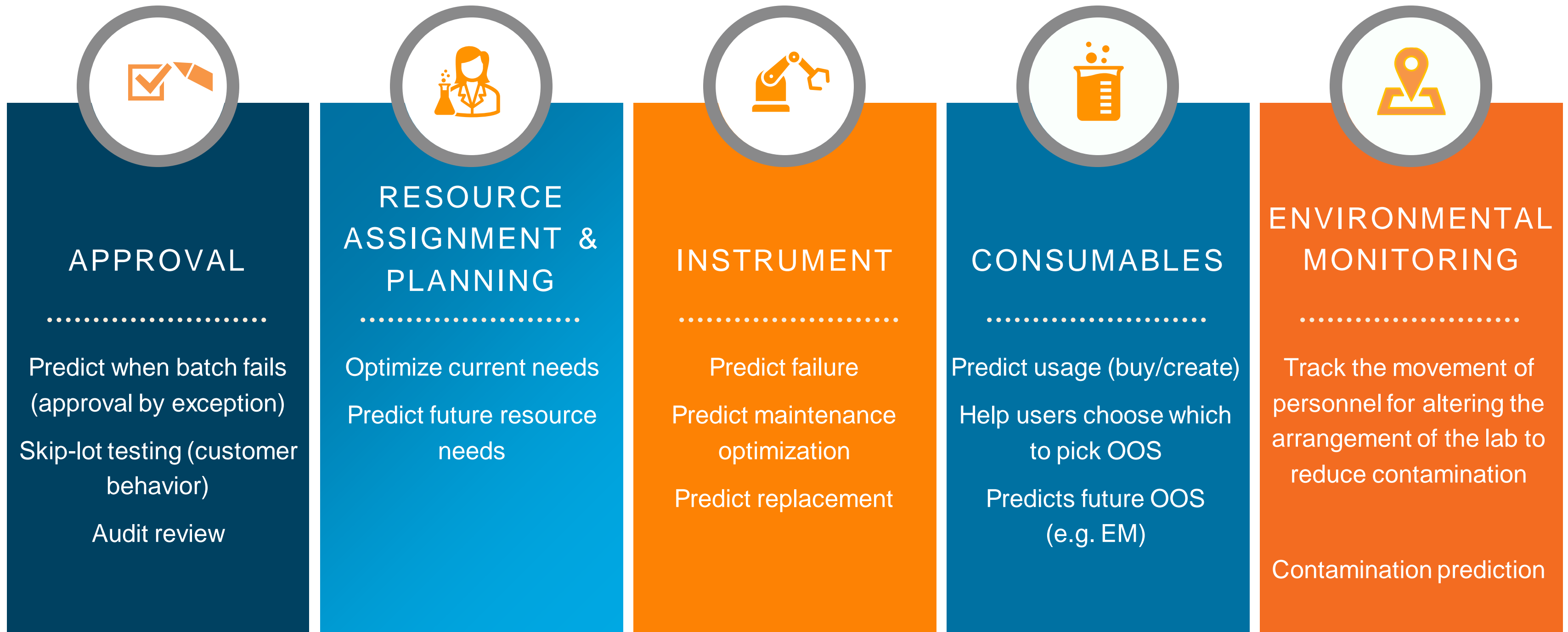
AI/ML Advanced analytics

The LabVantage's Digitally Native Ecosystem

Data



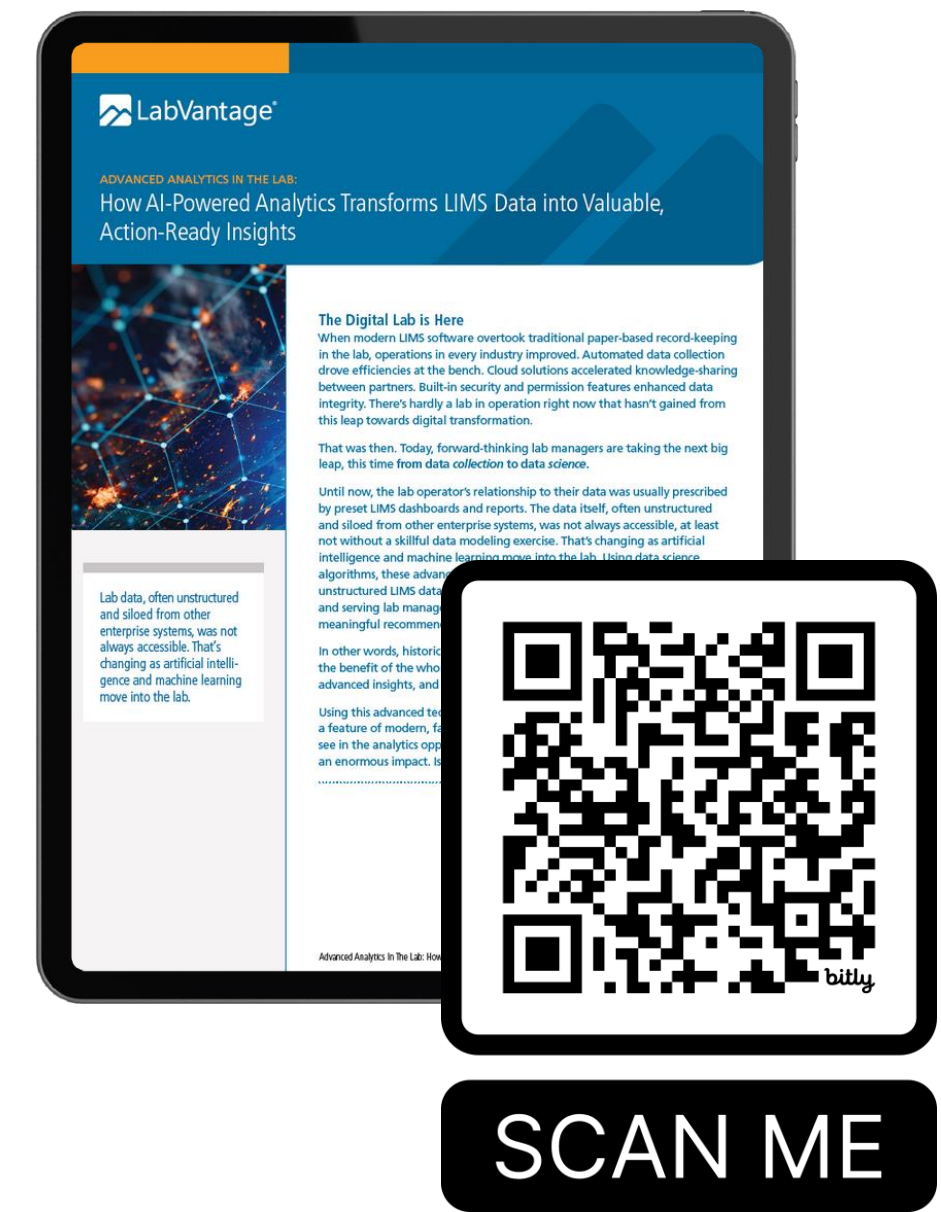
How LabVantage Is Working Towards Building the Next-Gen Infra for Our Clients



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How AI-Powered Analytics Transforms LIMS Data into Valuable, Action-Ready Insights



Download to learn more 



Thank you



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