

MATERIALS WEEK EUROPE



The next speaker is...

Kevin Meyer
Solutions Architect
Albert Invent



Scan below for
Conference Agenda



*Digital Transformation in the Chemical Industry:
From Strategy to Real-World Success*



Digital transformation in the chemical industry: From strategy to real-world success



Kevin Meyer

Sr Scientific Solutions Architect

Albert





Our mission is to accelerate the innovation of new materials.

Global team of 170+ chemists and engineers

Empowering scientists in 50+ countries

Used by over 250 organizations worldwide



Nouryon



THE WALL STREET JOURNAL.

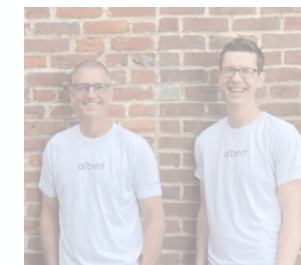
NEWS

February 25, 2025

Backed by J.P. Morgan, Albert is transforming chemical R&D with AI-driven innovation.

The growth-equity group's latest deal more than doubles the value of the AI-driven engine for research chemists

"J.P. Morgan has deep roots and history in the Chemicals industry, dating back to 1823. We believe this technology is essential for the future of material development and how we build materials that power our lives."



Oakland, Calif.-based company uses AI and machine learning to aid chemists in the research and discovery of new formulations and materials.

The return on modernizing R&D.

19x more likely to be profitable

23x more likely to acquire customers

6x more likely to retain them

Accelerate Product Velocity

Standardize data and workflows to align R&D teams and eliminate fragmentation

Generate and optimize formulations based on defined performance targets

Reduce development cycles and get products to market faster

Attract and Empower Talent

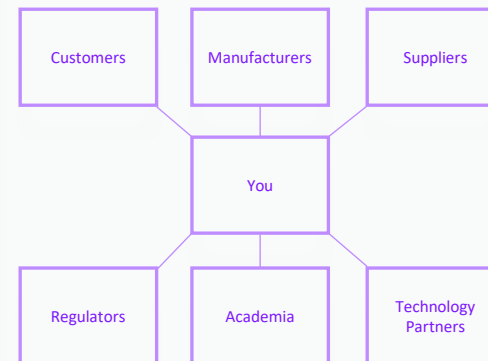
Automate low-value work so technical teams can focus on insight, not admin

Equip scientists with modern, intuitive tools that support how they want to work

Create a high-performance environment that draws and retains top-tier talent

Ecosystem Leadership

Mature companies are a partner of choice in digital ecosystems



Adapt to Market Change

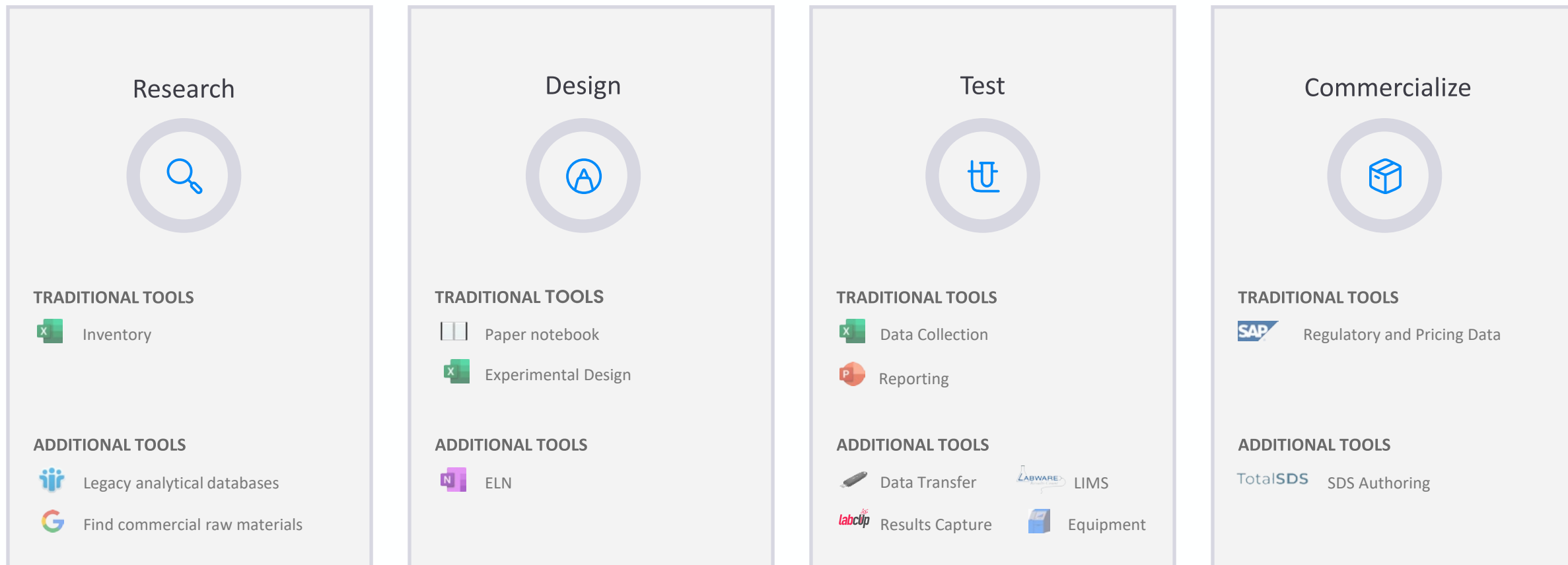
Quickly respond to supply chain disruptions and regulatory shifts

Modify formulations and development plans in real time to meet requirements

Keep projects on track without losing momentum, even in volatile conditions

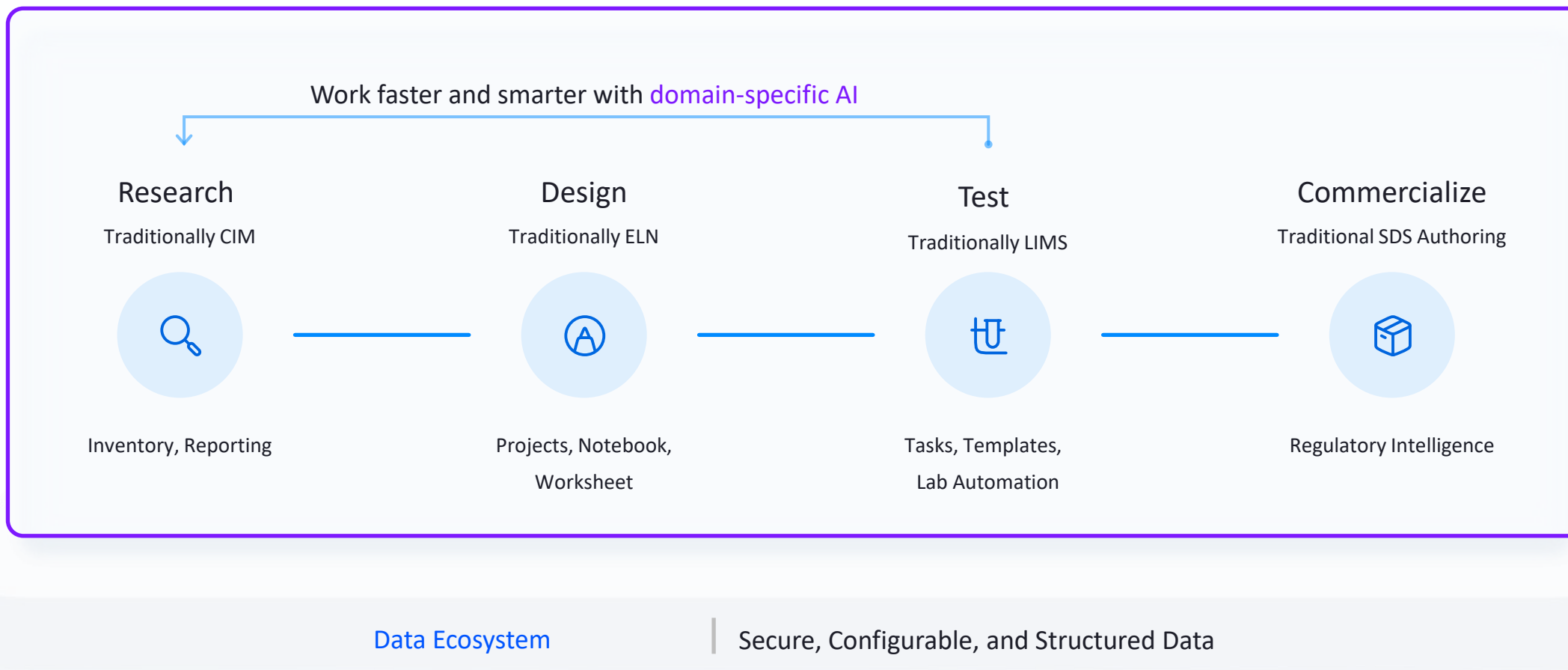
The root problem

Scattered tools and unstructured data hinder data-driven decisions and slow down R&D



The future of materials innovation

True digital transformation requires a single source of truth for R&D – with AI solutions layered over this foundation



The **future** of materials innovation

True digital transformation requires a single source of truth for R&D – with AI solutions layered over this foundation

Albert



The **future** of materials innovation

True digital transformation requires a single source of truth for R&D – with AI solutions layered over this foundation

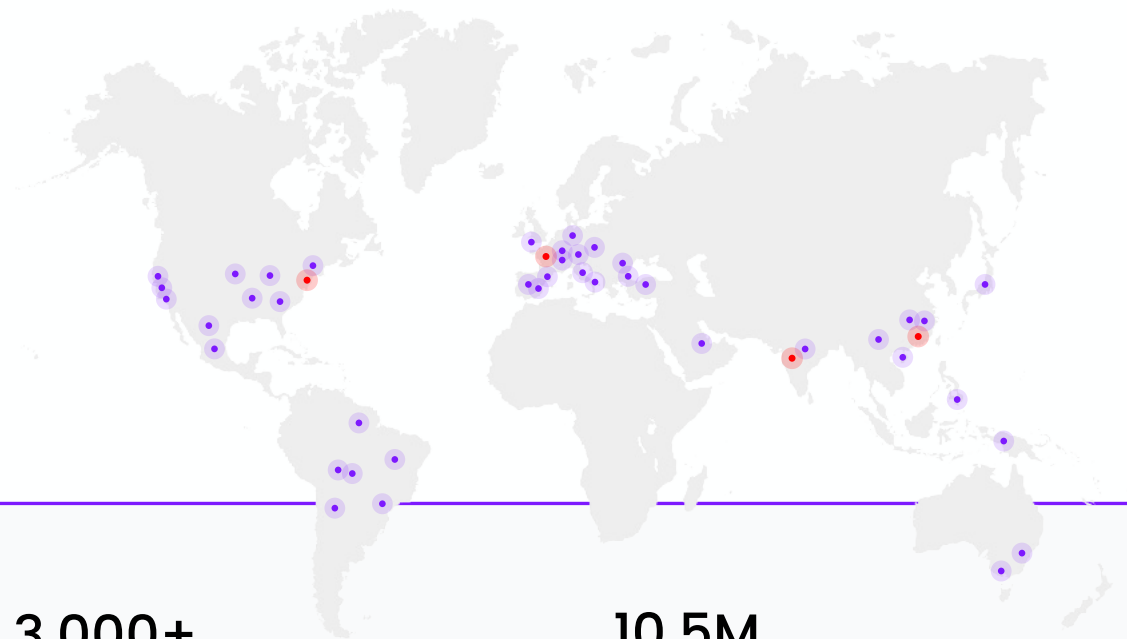
Albert



Henkel Connects Global R&D Under One Digital Roof

Henkel

System of Record



3,000+

Scientists, technicians & engineers

10.5M

Clean & structured data points collected

100+

Labs across 41 countries

225,000+

Products invented across 170 technologies

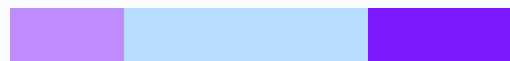
Henkel Accelerates High Throughput Testing and Product Development

Henkel

System of Record

30%

Reduction in development timeline



Before Albert



After Albert

Requirements Definition

Development

Validation

Launch

60k+

Annual high throughput samples

Weeks to same day

Reduced testing timeline

64

Net Promoter Score

“With automation, I can work more efficiently – freeing me to explore new directions and unexpected formulations.”



Karen Midori

Product Development Technician

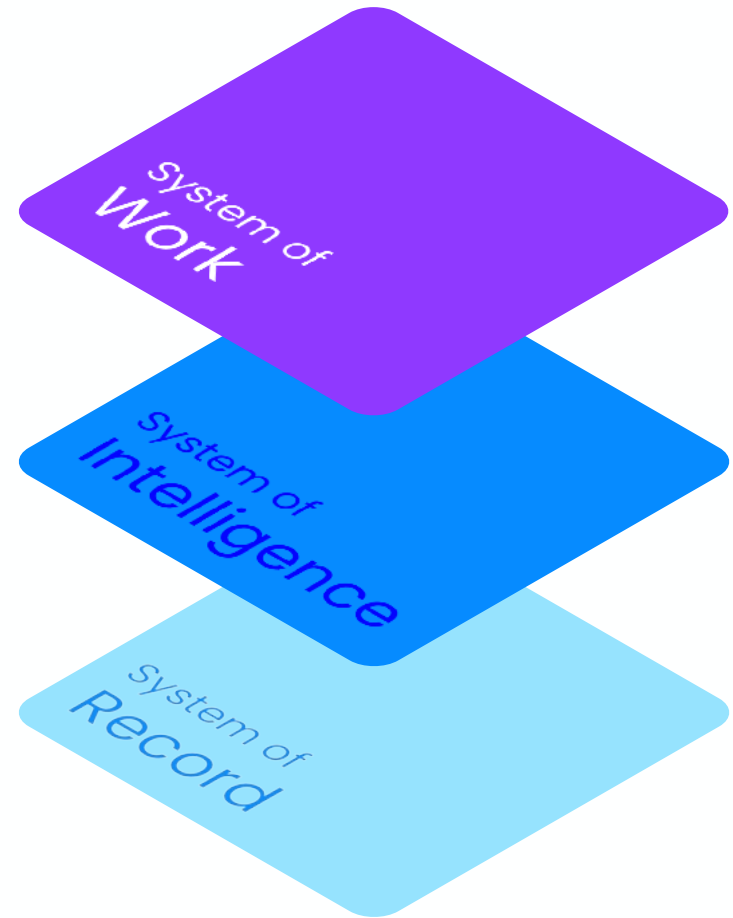
Henkel

Albert

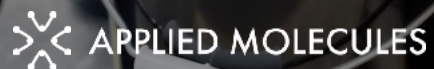
The **future** of materials innovation

True digital transformation requires a single source of truth for R&D – with AI solutions layered over this foundation

Albert



Applied Molecules Uses AI to Reinvent Their Go-to-Market Motion



System of Intelligence

Dampening Materials

22 existing formulas referenced

30 AI-generated formulations tested

3 iterations performed in Albert

3D Printing

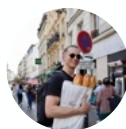
60 existing formulas referenced

45 AI-generated formulations tested

12 iterations performed in Albert

Development reduced from

3 months to **2 days**



“If you gave me 5 years, I never would have tried this formula. But it worked.”

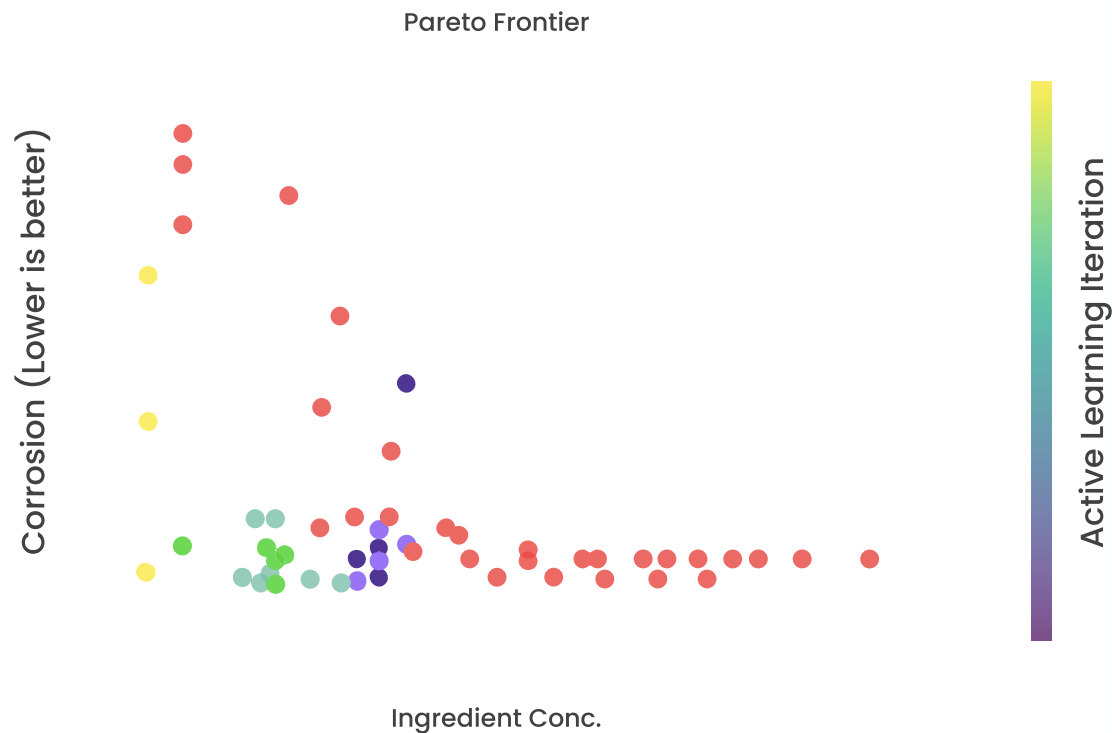
Nicholas Gripp, Senior Scientist, Applied Molecules



Pushing Beyond the Pareto Frontier

System of Intelligence

ALBERT CUSTOMER: FORTUNE 500 CHEMICAL COMPANY



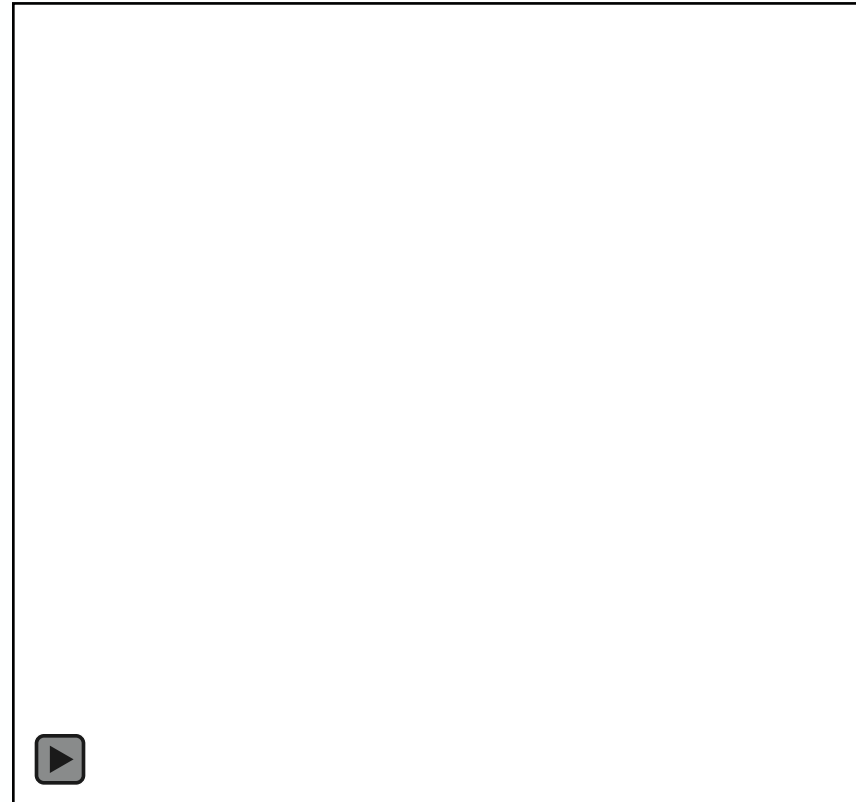
New candidates continue to push beyond the historical frontier and get progressively closer to eliminating the regulated ingredient and maintaining a high corrosion resistance

Identification and removal of thousands of duplicate SKUs

System of Intelligence

THIRD LARGEST SUPPLIER OF INKS AND COATINGS

Identified duplicate formulations through SKU rationalization of large historical database of 400K+ formulations from SAP





Embedding regulatory compliance into innovation at Carbon

Carbon

System of Intelligence

BEFORE

Slow, expensive SDS generation through vendor

\$650

Average price per new SDS

3-8 week

Lead time and delays in shipping products to customers

AFTER

Immediate, cost-efficient SDS generation in-house

1000+

Auto generated R&D and commercial SDSs in-house

New markets

Enabled through facilitated shipping to new regions

Albert



The **future** of materials innovation

True digital transformation requires a single source of truth for R&D – with AI solutions layered over this foundation

Albert



People management drives data management



System of Transformation

10 possible areas of impact for employees:

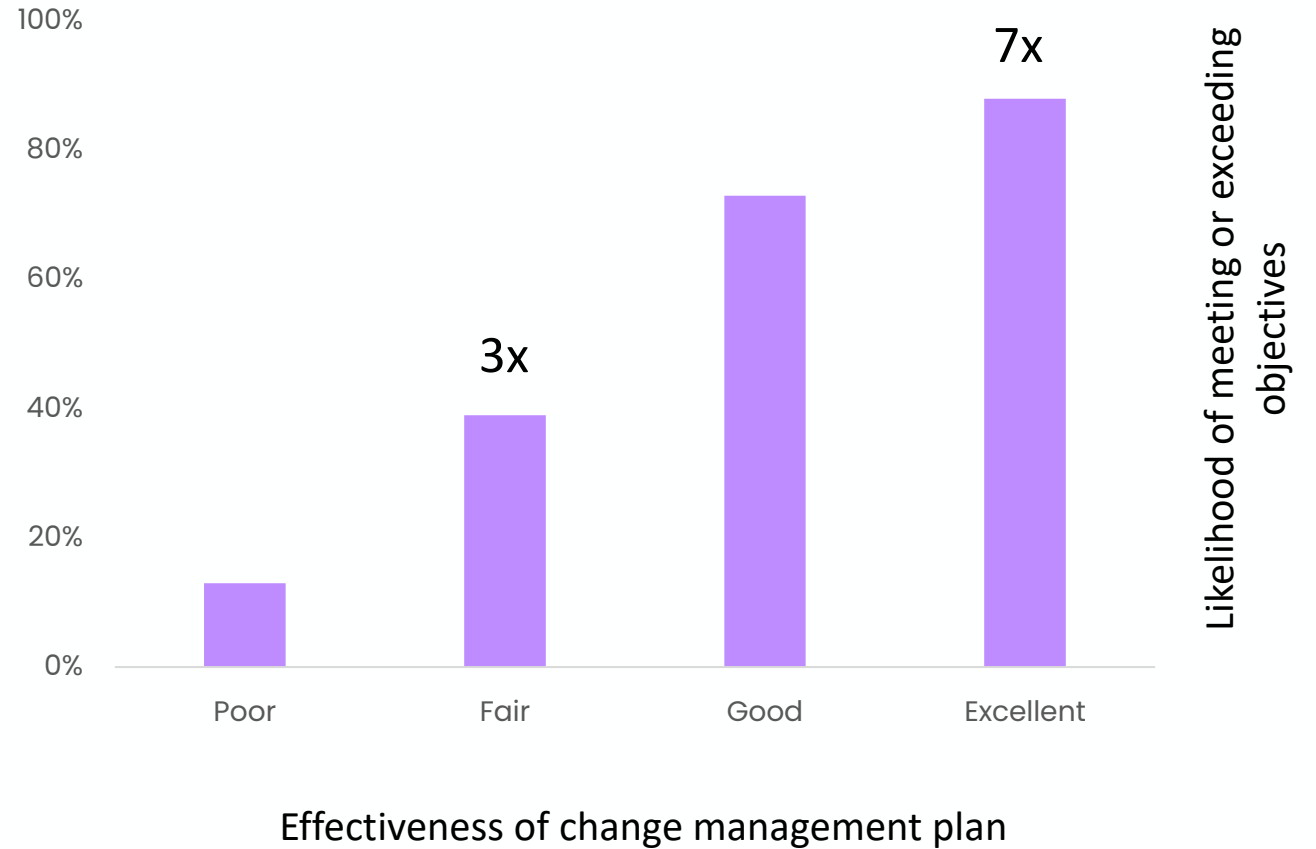
1. Processes
2. Systems
3. Tools
4. Job Roles
5. Critical Behaviors
6. Mindset / Attitude / Beliefs
7. Reporting Structure
8. Performance Reviews
9. Compensation
10. Location

Impact Level for Digital Transformation: 7 out of 10

People management drives data management



System of Transformation



© 2023 Prosci, Inc.

People management drives data management



System of Transformation

Enabling a cultural shift requires the following best practices:

Aligning change management with technical program management

Executive sponsorship as a visible and ongoing force

Early insight into structure, culture, and barriers

Dedicated resourcing for non-trivial execution

Sustaining change beyond go-live

Building Marabu's Lab of the Future through cross-functional collaboration



System of Transformation

THE APPROACH

Leadership clearly communicated that the transition from paper and Excel to digital would occur in 9 months

Empowered users to test different hardware options (tablets, projectors, HoloLens, etc.) during this transition period

Aligned goals across R&D and regulatory for win-win solution that maintains compliance while increasing efficiency

THE OUTCOME

62%

Daily users over the past year

100%

R&D projects now run within Albert

“With Albert, I’ve created new workflows completely outside of Excel – it’s much easier for me to see trends this way.”

Daniela Vogt, Scientist, Marabu Inks



Marabu

Albert

The **future** of materials innovation

True digital transformation requires a single source of truth for R&D – with AI solutions layered over this foundation

Albert

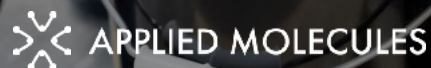




Albert™



System of Intelligence: Applied Molecules Uses AI in Every Experiment



Dampening materials

Developing a new dampening material with optimal storage modulus and dampening factor.

22 existing
formulations

4 new materials
explored

30 AI-generated
formulations tested

3 formula iterations
in Albert Breakthrough

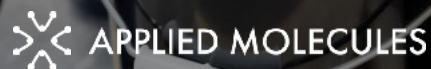
“Breakthrough AI cut our formulation development time from 3 months to 2 days.”



Cameron Darkes-Burkey
Senior Scientist, Applied Molecules



System of Intelligence: Applied Molecules Uses AI in Every Experiment



3D printing resins

Improving Heat Deflection Temperature, Impact Strength, Ultimate Tensile Strength, Elongation, and Tensile Modulus

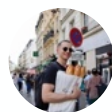
60 existing
formulations

13 new materials
explored

30 AI-generated
formulations tested

12 formula iterations
in Albert Breakthrough

“If you gave me 5 years, I never would have tried this formula. But it worked.”



Nicholas Gripp
Senior Scientist, Applied Molecules