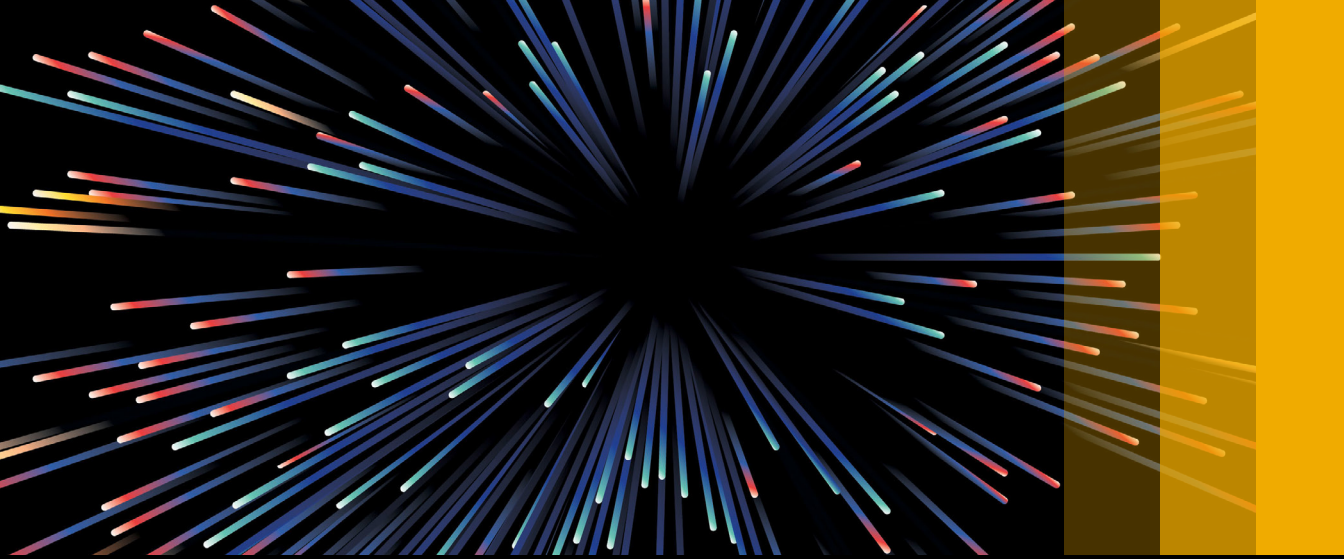


SAP Leonardo

# SAP Leonardo Digital Innovation System
## Capabilities & Success Stories

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# Introducing the SAP Leonardo Digital Innovation System



## The time is now.

Never before have there been so many promising breakthrough technologies available — and so many businesses ready to capitalize on them. From Machine Learning to Blockchain, from Cloud to the Internet of Things (IoT), smart devices, Analytics, and more, companies are eager to run smarter and take advantage of the new business possibilities they offer.

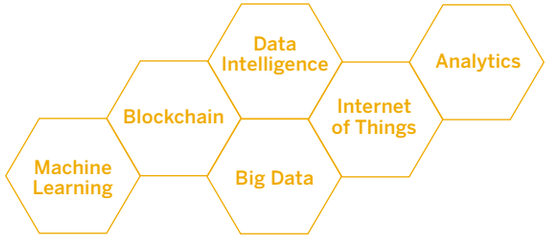
*Where should you start? How will you realize the promise of these technologies without interrupting your business today?*

**SAP can help.**
SAP's core business is to leverage technology to solve problems across all industries and lines of business worldwide. We work with more than 350,000 customers whose SAP systems touch 70% of the world's transactional data. Already a leader in enterprise applications, we have now developed the world's only digital innovation system that integrates today's transformational technologies — so you can innovate at scale to confidently redefine your business. **Meet SAP Leonardo.**

## What is SAP Leonardo?

SAP Leonardo is a holistic digital innovation system that seamlessly integrates future-facing technologies and capabilities into the SAP Cloud Platform, using our Design Thinking Services. This powerful portfolio enables you to rapidly innovate, scale new models, and continually redefine your business.

**Design Thinking Services:** SAP Leonardo Technologies



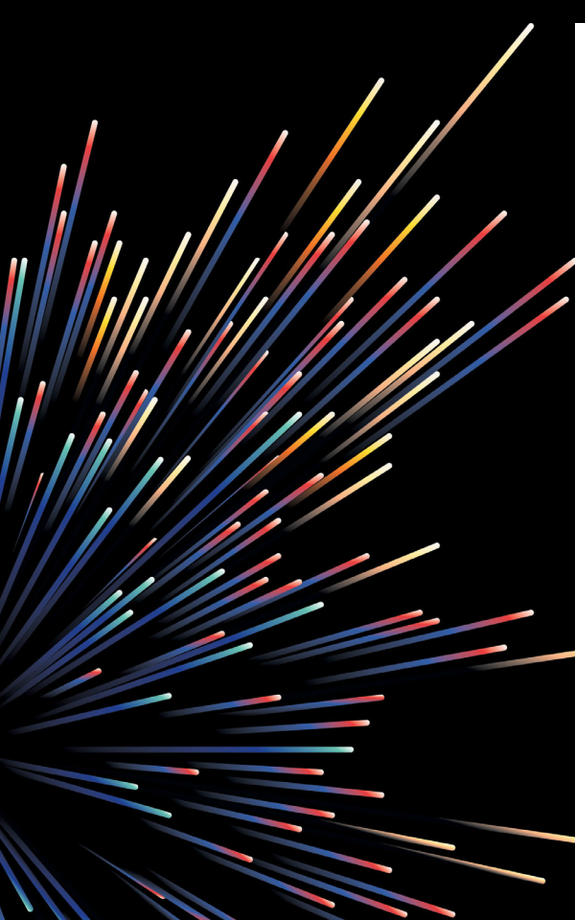

**SAP Cloud Platform:**
Microservices | Open APIs | Flexible Runtimes | Integration

**Innovate:** SAP Leonardo delivers new capabilities in Machine Learning, IoT, Big Data, and Analytics. Reimagine and redefine your processes to become a truly digital business.

**Integrate:** SAP Leonardo enables innovation and learning even greater than the sum of its parts. From the cloud platform to the applications themselves, SAP Leonardo is open, extendable, and ready to be woven into every facet of your business.

**Scale:** SAP Leonardo allows for rapid implementation and seamless scaling through the existing SAP platform and application portfolio. Automate and augment existing processes, develop new applications, make existing SAP and third-party applications more intelligent, and power new business models.





## Built for all industries, tailored to yours.

SAP Leonardo was designed to be adaptable and open to bring innovation at scale to every industry. Our flexible approach lets you build a solution specific to your industry or business need. Plus, to facilitate more rapid implementation, an initial set of pre-built accelerators are available today in retail, consumer products, manufacturing, and sports and entertainment – with more accelerators coming.

- Accelerators are fixed price and scale to support implementations of any size
- Each includes software and services to solve industry-specific business problems
- Cloud software subscription and project initiation services are also included
- Start small and combine accelerators to accommodate larger projects

## How can an accelerator help a specific industry?
Here is an example in the retail industry

### Business challenge
Retailers selling refrigerated and frozen goods need to manage freezers, refrigeration, and cooling units, which is a large investment. Not only do they need to be maintained, the retailer must also manage inventory in order to minimize spoilage and product expiration.

### An accelerator can be used to:
- Predict maintenance needs before the freezer/ refrigerator unit fails
- Optimize inventory levels, reducing lost revenue due to spoilage
- Ensure consistent temperatures with pre-set tolerances

## We'll help you get the most of your accelerator(s) every step of the way:

1. **Solution Ideation & Vision**
Global SAP Leonardo centers for design thinking and innovation

2. **Rapid Prototyping**
Bringing innovative ideas to life and build on them

3. **Business Case Development**
Create, test, and refine business cases for ROI and strategic value

4. **Technology Blueprint**
Create a technology road map, identify dependencies, minimize risk

# SAP Leonardo: Intelligently connecting people, things, and businesses.

SAP Leonardo delivers new capabilities in future-forward technologies, which add tremendous value along your company's digital journey. But it's made even more valuable because it's built on SAP HANA, our in-memory database to support real-time business. Plus, SAP Leonardo works seamlessly with every SAP application from SAP Ariba to SAP S/4HANA, making them more powerful, intelligent, and capable.

## Seamlessly integrated for powerful intelligence.

By using SAP Leonardo into the breadth of the SAP portfolio, we unlock and power a virtuous cycle of innovation.

**System of Record**
(business processes)

- SAP S/4HANA
- SAP Hybris
- SAP SuccessFactors
- Concur
- SAP Fieldglass
- SAP Ariba

**SAP Leonardo** makes SAP Applications more intelligent and capable.

**System of Intelligence**

- Internet of Things (IoT)
- Machine Learning
- Analytics
- Big Data
- Blockchain
- Data Intelligence
- Design Thinking

SAP Leonardo

**SAP Leonardo** delivers capabilities to create and scale new intelligent applications.



# SAP Leonardo Capabilities



## Design Thinking

**Engaging methodology used to uncover opportunities for digital transformation**

- Reimagine a shared vision of the future digital enterprise
- Use BUILD to ideate and create rapid, interactive prototypes
- Lay the foundation for a customized SAP Leonardo system



## Internet of Things (IoT)

**Connect things with people and processes**

- Connected products, assets, and fleets to drive Industrial IoT
- Connected infrastructures, markets, and people to enable the Internet of Everything



## Machine Learning

**Intelligence enabled by learnings from data**

- Intelligence embedded into enterprise applications
- Integrated intelligence to solve common business challenges
- Train and deploy deep learning models



## Analytics

**Insight that enables transformative actions**

- All analytics across your business
- Embedded machine learning
- New processes and applications based on insights



## Big Data

**Manage vast amounts of big data**

- Distributed storage and computing
- Real-time insight discovery
- Insights embedded into business processes



## Blockchain

**Blockchain services embedded into business applications**

- Increased trust in peer-to-peer transactions
- Full visibility of goods provenance and history of ownership
- Increased auditability and decreased fraud



## SAP Cloud Platform

**Foundation for SAP Leonardo**

- Common foundation across applications and technology
- In-memory, real-time data management
- Integrates things, people, and processes



## Data Intelligence

**Put data into business context**

- Trusted, real-time benchmarks
- Decision-making scenarios
- Data asset monetization

## A system unlike any other.

- User-centered design thinking
- Rapid and continuous innovation that scales
- Digitize an entire business – from the front office to the back office
- 40+ years of business processes experience
- Simplicity in licensing/pricing
- End-to-end solutions, no assembly required



"**SAP Leonardo** will unlock the full potential of the intelligent enterprise."

– Bill McDermott, CEO

## Join those already innovating with SAP.

"SAP software contributes to **more efficient** management of the city, simplifies our operations, and greatly improves the quality of life for all."

– Rodrigo Silvosa, Deputy Minister of Public Space Maintenance

**City of Buenos Aires**
SAP helps drive digital transformation for cleaner streets and drains, and greater safety and transparency.

"Our work with **SAP S/4HANA** lays the groundwork for sensors, Internet of Things, and machine learning – all of the things that make sense for the enterprise."

– Tom Pollock, Head of Information Management

**Northern Gas Network**
SAP technology helps create an insights-driven organization in a highly regulated industry.

"With **SAP predictive modeling** and data visualization, we can better understand our workforce, identify turnover factors, and keep the right people."

– Chris Orban, VP Advanced Analytics

**Covenant Transportation Group**
SAP helps reduce driver turnover and build a safer workforce

Redefine your path forward today.
**sap.com/leonardo**

# Success Stories



# City of Buenos Aires

**Gobierno de la Ciudad Autónoma de Buenos Aires**
*(City of Buenos Aires – Ministry of Environment and Public Space)*
Buenos Aires, Argentina
www.buenosaires.gob.ar

**Industry**
Public sector

**Products and Services**
Public services for approximately 6 million citizens

**Employees**
Approximately 120,000

**SAP Leonardo Capabilities:**
Analytics
Big Data
Internet of Things

*Original Asset*

## Gobierno de la Ciudad Autónoma de Buenos Aires: Staying Dry with Help from SAP® Solutions

Founded in 1580 at the mouth of the Rio Plata, Buenos Aires is subject to annual torrential rains. Given its aging infrastructure and dense population, flooding has historically been an issue. Clogged storm drains have slowed down the city, caused property damage, and even resulted in lost lives over the years. But recently, after three days of torrential rainfall, the city did not experience any flooding at all.

Using the SAP HANA® platform to analyze real-time sensor data from storm drains and SAP® Mobile Platform to ensure streets and drains are clear, the City of Buenos Aires is well prepared to mitigate risks caused by heavy rains. It is using SAP solutions to maintain its infrastructure, manage complex contractor and supplier relationships, elevate its services, and improve lives.

### Objectives

- Manage resources that maintain over 700,000 assets, including streets and lights, parks, bus stops, drains, buildings, and bridges
- Quickly respond to service requests and improve trash collection
- Predict and prevent flooding and resulting damage and losses

### Resolution

- Enabled the collection, monitoring, and analysis of real-time sensor data from storm drains, weather reports, and back-end SAP® software systems using the SAP HANA® platform
- Streamlined permit, supplier, and contractor management with the SAP Customer Relationship Management and SAP ERP applications
- Enabled monitoring of contractor performance and maintenance-related tasks with SAP Mobile Platform
- Enhanced and optimized IT infrastructure with SAP Mobile Platform and SAP Process Integration technology
- Provided mobile apps to inspectors

### Key Benefits

- Clean streets, clear drains, and greater safety and transparency for citizens




***TESTIMONIAL VIDEO***
*SAP IoT – the simple way to keep flooding at bay in Buenos Aires*

"SAP software technology **innovation contributes to more efficient management** of the city, simplifies our operations, and greatly improves the quality of life for all the people living here."

— Rodrigo Silvosa, General Director of Control Management for the Environment and Public Spaces Ministry, Gobierno de la Ciudad Autónoma de Buenos Aires

**0 floods**
After three days of torrential rain

**30,000 storm drains**
Kept clear

**80% response rate**
To infrastructure issues in 2014, compared to 1% in 2009

**>280,000 complaints**
Resolved annually

**~190,000 claims**
For inspections investigated each year

# Fibria Celulose

## Renewing Forests and Improving Pulp Production Using SAP® Predictive Analytics

**Fibria Celulose**
São Paulo, Brazil
fibria.com.br/en

**Industry**
Mill products

**Products and Services**
Production of bleached eucalyptus pulp from renewable tree plantations

**Employees**
16,738 (2015)

**Revenue**
R$10.081 billion
(US$3.09 billion) (2015)

**Partner**
Ernst & Young
www.ey.com

**SAP Leonardo Capabilities:**
Analytics
Big Data



Original Asset

### Objectives

- Enable projects with vast amounts of data
- Support the company's business strategy and sustainability goals
- Optimize processes to increase the level of plantation productivity and profitability

### Resolution

- Identified key areas where insights from Big Data Analytics should result in biggest operational gains
- Deployed SAP® BusinessObjects™ Predictive Analytics software with the SAP HANA® platform

### Benefits

- Better handling instructions for tree clones as a result of acquired knowledge
- Enhanced demobilization and acquisition of assets
- Influential variables in wood consumption identified
- Greater understanding and control of industrial processing variables

**Company Objectives: Synergy, optimization of infrastructure, and Big Data projects**

With a presence in 242 towns in seven Brazilian states, Fibria Celulose is the world's leading producer of bleached eucalyptus pulp with an annual production capacity of 5.3 million tons. Its factories are based in Três Lagoas (state of Mato Grosso do Sul), Aracruz, (state of Espirito Santo), Jacareí (state of São Paulo), and Eunápolis (state of Bahia).

The company was created from the merger of Aracruz and Votorantim Celulose e Papel in 2009, and after the merger its operations underwent a complex process to achieve synergy. This process included rethinking the business strategy, which required focusing on the wood pulp business, optimizing the IT infrastructure, and implementing Big Data and predictive analytics projects.

Together with Ernst & Young consultants, Fibria created strategic IT business forums in which they worked in partnership with several business departments of the company to identify the areas that were prepared to deal with analytics involving Big Data. Twenty-six projects were found to be ready to take advantage of Big Data analysis.

**Resolution: Improving clone growth analysis and processes with Big Data insight**

After identifying the projects that warranted investments in analytics in 2015, Fibria chose the ones that could lead to the best returns for the business. Using SAP® BusinessObjects™ Predictive Analytics software with the SAP HANA® platform, the company worked first on projects from its technology center and its industrial processes.

One of the responsibilities of Fibria's technology center is to develop new eucalyptus clones, as well as better handling practices. It is challenging to foresee the impact of climate change during the growth of these clones. To minimize these impacts and to make sure that the targeted amount of wood is produced, Fibria used SAP BusinessObjects Predictive Analytics to identify in advance the factors and variables that could interfere with the development of the eucalyptus. Wilson Lopes, CIO for Fibria, explains, "We mapped data sources, understood the variables, found correlations with climate data, and thus reduced the impact of climate in our forests."

On the industrial side, another project justified the investment in analytics. By analyzing almost 1.6 billion records and over 654 variables, Fibria could identify how best to configure and adjust its digesters – the equipment used to convert wood into pulp, the raw material used to produce bleached pulp.

**Business Transformation: Gaining productivity and profitability with a rapid ROI**

Fibria's was the first analytics project in Brazil to use SAP BusinessObjects Predictive Analytics – and the first-ever project involving wood pulp to use the software. The outcomes were so positive that Fibria achieved a remarkable ROI in less than one year of deploying the software in production.

From the predictive analysis of data generated during 14 years in operation, the company has started counting on optimized processes in its core businesses, which means lower costs, higher productivity, better production processes, greater efficiency, and optimization of investments. "The company should now be able to expand the deployment of predictive analytics to optimize processes in other areas," says Lopes

**Future Plans: Enabling end-to-end predictive analysis**

The outstanding outcomes experienced in the two initial projects have led Fibria to consider gradually deploying predictive analytics with SAP HANA in other projects that were identified in the strategic IT business forums. "We count on a structured architecture and database and vast processing capacities for our Big Data and analytics projects program," says Lopes.

"After unifying the **IT infrastructure**, we searched for a solution that would allow us to apply Big Data analytics, helping us to support the investments that had been made up to that point." — Wilson Lopes, CIO, Fibria Celulose

**ROI**
in under 1 year

**Faster**
Results by identifying best analytics projects to undertake

**Improved**
Support for decision making related to annual forestry plans

**654**
Variables organized in SAP HANA

**735 million**
Records in only 27 GB with SAP HANA

**1.6 billion**
Records analyzed

# Hamburg Port Authority

**Hamburg Port Authority (HPA)**
*Anstalt öffentlichen Rechts*
Hamburg, Germany
hamburg-port-authority.de

**Industry**
Travel and Transportation

**Products and Services**
Port management development

**Employees**
1,808 (2013)

**Revenue**
€280.68 million (2013)

**Partner**
T-Systems International GmbH
www.t-systems.de
Datenkommunikationssystem AG (DAKOSY)
www.dakosy.de

**SAP Leonardo Capabilities:**
Analytics
Internet of Things

*Original Asset*

## Doubling Cargo Handling Capacity with Optimized Logistics Using SAP HANA® Cloud Platform

With limited area for cargo handling, HPA must make sure that every player across the port's supply chain is connected. To this end, it worked with T-Systems and SAP HANA® Cloud Platform to developed the smartPORT logistics platform to increase efficiency and capacity.

### Objectives

- Real-time information exchange
- Greater cargo handling speed and capacity
- Interconnected infrastructure to extend the port's lifetime, offer new services, and transport goods more safely and effectively

### Why SAP

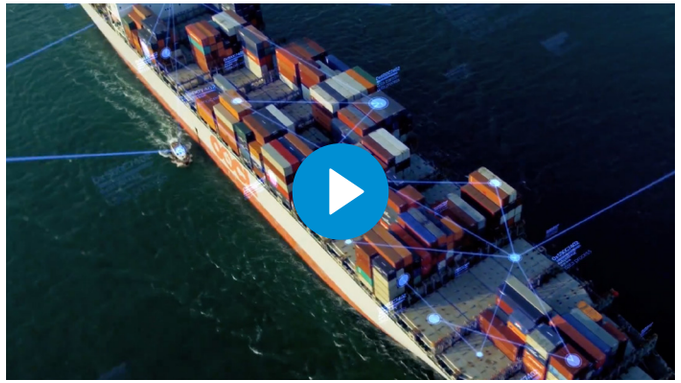
SAP HANA® Cloud Platform to enable real-time processing of and role-based access to unstructured data

### Resolution

- Built the smartPORT logistics platform using SAP® Networked Logistics Hub to connect supply chains end to end
- Worked with T-Systems to integrate telematics, upgrade mobile terminal devices, and build geofences for communication integration
- Implemented a DAKOSY logistics solution
- Connected the entire port supply chain, providing everyone with complete traffic information
- Enabled graphic representations of truck positions and infrastructure status

### Future Plans

- Onboard more partners to the platform
- Extend services and sales promotions for smartPORT logistics to external partners
- Enable container depots and chassis lessors to be emptied



***TESTIMONIAL VIDEO***
*SAP IoT – Hamburg Port Authority CEO Video*

"The smartPORT logistics platform running on **SAP HANA Cloud Platform** will help us to achieve our goal of doubling cargo handling capacity. The more partners that participate, the more effectively the port will run."

— Sascha Westermann, Head of Intermodales, IT Traffic Management, wwHamburg Port Authority (HPA), Anstalt öffentlichen Rechts

**5 minutes**
Driving saved per truck and tour, equaling 5,000 hours per day over 40,000 trips

**Reduced**
Wait time for truck drivers

**Increased**
Throughput for freight forwarders

**2x**
Increase in cargo handling in the Port of Hamburg

# Mercedes-AMG

**Mercedes-AMG GmbH, a subsidiary of Daimler AG**
Affalterbach, Germany
www.mercedes-amg.com

**Products and Services**
Compressed air systems and compressed air consulting services

**Industry**
Automotive

**Employees**
900

**Partners**
Modern Horsepower LLC
www.modernhorsepower.com
SAP® Active Global Support organization

**SAP Leonardo Capabilities:**
Analytics
Internet of Things

*Original Asset*

## Driving High Performance with SAP® Business Suite powered by SAP HANA® and the Internet of Things

In line with its motto "Driving performance," Mercedes-AMG develops high-performance, gold-standard cars. Engine testing is a costly and data-intensive process. And, while most engine failures occur within minutes, failed tests could not be identified until after completion, resulting in hours of lost time and resources.

To quickly monitor sensor data on the interactions of up to 100 engine components, Mercedes-AMG worked with the SAP® Active Global Support organization to deploy a solution that combines SAP® Business Suite powered by SAP HANA® and sensor technology from Modern Horsepower. Now it can detect engine failures as soon as they happen, allowing engineers to terminate tests immediately and more quickly analyze what went wrong. The result is the equivalent of an extra day of testing capacity each week, helping Mercedes-AMG improve performance and lower costs.

**Top Objectives**
- Drive mission-critical core business processes across the company
- Enable real-time engine testing that leverages the Internet of Things
- Identify engine quality improvement options using predictive analytics

**Resolution**
- Deployed SAP® Business Suite powered by SAP HANA® with a virtualized environment from VMware and tailored data center integration
- Predicted issues using SAP Predictive Analysis software and delivered test results to workers on tablets using the SAP BusinessObjects™ Business Intelligence platform for faster resolution
- Developed the Real-Time Quality Assurance solution using SAP Business Suite powered by SAP HANA and sensors from Modern Horsepower

**Key Benefits**
- One platform for engine testing, development, and quality assurance
- Dashboard to show engine failures and test results in real time
- Higher testing capacity, helping reduce overall capital expenditures
- Predictive analytics based on detailed sensor data, enabling innovative scenario testing, optimized development, and lower production costs



***TESTIMONIAL VIDEO***
*Co-Innovation with Mercedes-AMG: A Journey of Shared Expertise*

"By combining sensor technology from Modern Horsepower and SAP Business Suite powered by **SAP HANA**, we get engine testing results in real time. This breakthrough innovation is just the start. Ultimately, we want to monitor engine performance in customer vehicles."

— Reinhard Breyer, Chief Information Officer, Mercedes-AMG GmbH

**>76%**
Of processes tested showed process improvements

**Up to 30,000**
Data sets processed per second

**94%**
Faster runtimes on unsuccessful test-drives, thanks to real-time interruptions (from 50 to just a few minutes)

**1 day**
Equivalent increase in weekly testing capacity

**6 months**
To deploy using SAP MaxAttention™ offerings

# Meteo Protect

**Meteo Protect**
Paris, France
www.meteoprotect.com

**Products and Services**
Insurance that helps cover the financial consequences of adverse weather

**Industry**
Insurance

**Employees**
20

**Partners**
Modern Horsepower LLC
www.modernhorsepower.com
SAP® Active Global Support organization

**SAP Leonardo Capabilities:**
Analytics
Internet of Things

*Original Asset*

## Providing Fully Customized Weather Insurance Quotes in Real Time with SAP HANA®

### Objectives
- Provide better insurance to protect companies when weather conditions adversely impact their business
- Aggregate and analyze vast quantities of weather data from multiple sources
- Offer fully customized insurance price quotes in real time

### Why SAP
- 100% of clients use SAP® software
- High-performance database required to perform rapid analyses

### Resolution
- Developed an app, Vivaldi, that lets customers specify their precise insurance needs
- Used the SAP HANA® platform to amass and analyze data and produce real-time insurance quotes for exact specifications
- Joined the SAP Startup Focus program and gained solution validation from SAP

### Benefits
- Created a new type of insurance to meet the needs of farmers and others affected by climate change and adverse weather conditions
- Provides insurance to one of France's largest grain cooperatives, Axereal, and other weather-sensitive businesses worldwide
- Was named an SAP HANA Innovation Award finalist




***TESTIMONIAL VIDEO***
*Meteo Protect: assurances personnalisées pour le risque météo avec SAP HANA risque météo avec SAP HANA ercedes-AMG: A Journey of Shared Expertise*

"With **SAP HANA**, we are able to cost-effectively price and underwrite index-based weather insurance targeted to clients' unique weather risks anywhere in the world."

— Gabriel Gross, CEO, Meteo Protect

**8x**
Faster scenario pricing with SAP HANA

**12x**
Faster data upload with SAP HANA

**Almost 7:1**
Data compression rate in SAP HANA

# Stara

**Stara S/A Indústria de Implementos Agrícolas**
Não-Me-Toque, Brazil
stara.com.br

**Industry**
Industrial machinery and components

**Products and Services**
Manufacture and sale of agricultural machinery

**Employees**
2,500

**Partner**
SAP Labs
www.sap.com

**SAP Leonardo Capabilities:**
Analytics
Internet of Things

*Original Asset CR*

## Bringing IoT to Agribusiness with SAP HANA® Cloud Platform and SAP® ERP Central Component

Farmers today know: take care of the soil and it will grow crops in abundance season after season. The Aquarius Project wants the farmers of Não-Me-Toque, a tiny city in the countryside of Brazil, to plow that understanding into higher farming yields. Stara S/A Indústria de Implementos Agrícolas, a supplier of agricultural machinery to over 35 countries worldwide, has positioned itself as an important partner for its customers' projects. Yet, to maintain a pivotal role in this scenario and take a lead in Brazil's agro-industry, it had to gear up for a digital transformation.

A big step toward Stara's digital transformation was implementing SAP® SuccessFactors® solutions running on the SAP HANA® Cloud Platform. This considerably improved data consistency, transparency, and collaboration among its 2,000 employees. To ensure maximum value realization of its SAP SuccessFactors solutions, Stara engaged the SAP Enterprise Support Advisory Council. By piloting performance-check and proactive application-check services as part of the program, Stara accelerated performance evaluation by 50%. The agricultural community in Brazil now gets world-class support from Stara faster with greater efficiency.

**Objectives**
- Integrate agricultural machinery sensors with SAP HANA® Cloud Platform
- Transfer data about planting, soil preparation, fertilizing, soil correction, spraying, and harvesting in real time
- Integrate data with the farm management software to enable real-time analysis

**Resolution**
- Developed a telemetry solution in partnership with SAP Labs
- Enabled farmers to monitor critical farming processes
- Gave farmers metrics to make decisions in real time about business-critical processes

**Benefits**
- Real-time monitoring of vital farm processes
- Tracking of work targets as defined in the crop planning process
- Better management of farm and planted areas



***TESTIMONIAL VIDEO***
*Stara Run Live Executive Series*

"When we launched our telemetry solution, our customers came to us saying they would like to have the data in their **ERP software**. We integrated the applications and presented a prototype."

— Cristiano Paim Buss, R&D Director, Stara S/A Indústria de Implementos Agrícolas

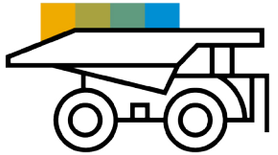
"Since the data is on the **SAP HANA platform**, it can be shared with SAP ERP Central Component or any other SAP solution."

— Cristiano Paim Buss, R&D Director, Stara S/A Indústria de Implementos Agrícolas

**100%**
Reliability of the data sent to SAP ERP Central Component

**100%**
Faster information retrieval for decision making

**More**
Efficient control



# Tennant

**Tennant Company**
Minneapolis, MN
www.tennantco.com

**Industry**
Industrial machinery and components

**Employees**
2,865

**Revenue**
US $754 million

**Partners**
SAP Services organization and LeverX Inc.

**SAP Leonardo Capabilities:**
Big Data
Internet of Things

*Original Asset CR*

## Tennant Company Cleans Up Change Management with SAP® PLM

### Objectives
- Merge multiple systems used for change process
- Ensure global accuracy and completeness of change orders while reducing time spent validating change order status
- Standardize core processes and ensure data quality as foundation for a more complete product life cycle management project
- Reduce selling, general, and administrative expenses

### Why SAP
- Implementation of the SAP® Product Lifecycle Management (SAP PLM) application, which includes functionality for workflow and bill of materials, change, and document management
- A single source of truth for all product data via one global instance
- Globally aligned processing workflow and material master setup utility that ensures data quality

### Benefits
- Enhanced change accuracy
- Provided business warehouse analytics for continuous process improvement
- Improved global visibility of changes in process

"We dramatically **improved the efficiency,** quality, global consistency, and traceability of the change processes within Tennant Company..."



***TESTIMONIAL VIDEO***
*Tennant creating a Cleaner, Safer World with SAP Big Data Insights and Internet of Things*

"...Further, we were able to shift **high-value resources** from change management to more strategic activities."

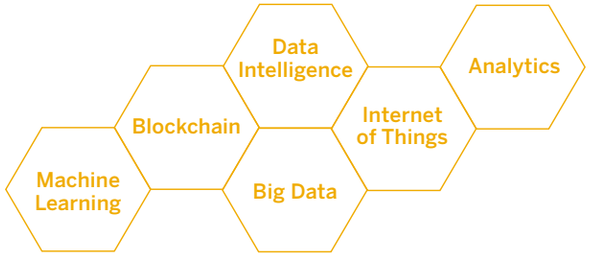
— Jason LaPlante, Business Process Governance, Tennant Company

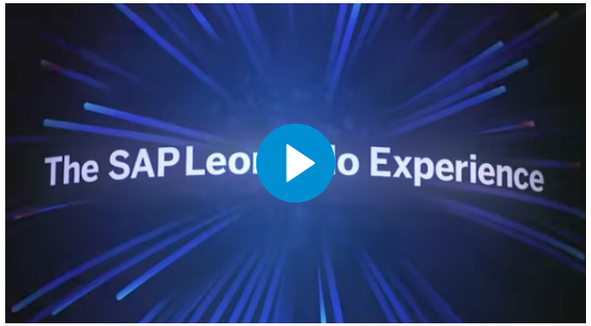
## Eliminated spreadsheets
used to track change orders

## Refocused high-value resources
from change tracking to development

## Gained scalability
to support current and future business needs and acquisitions

# Explore More SAP Leonardo



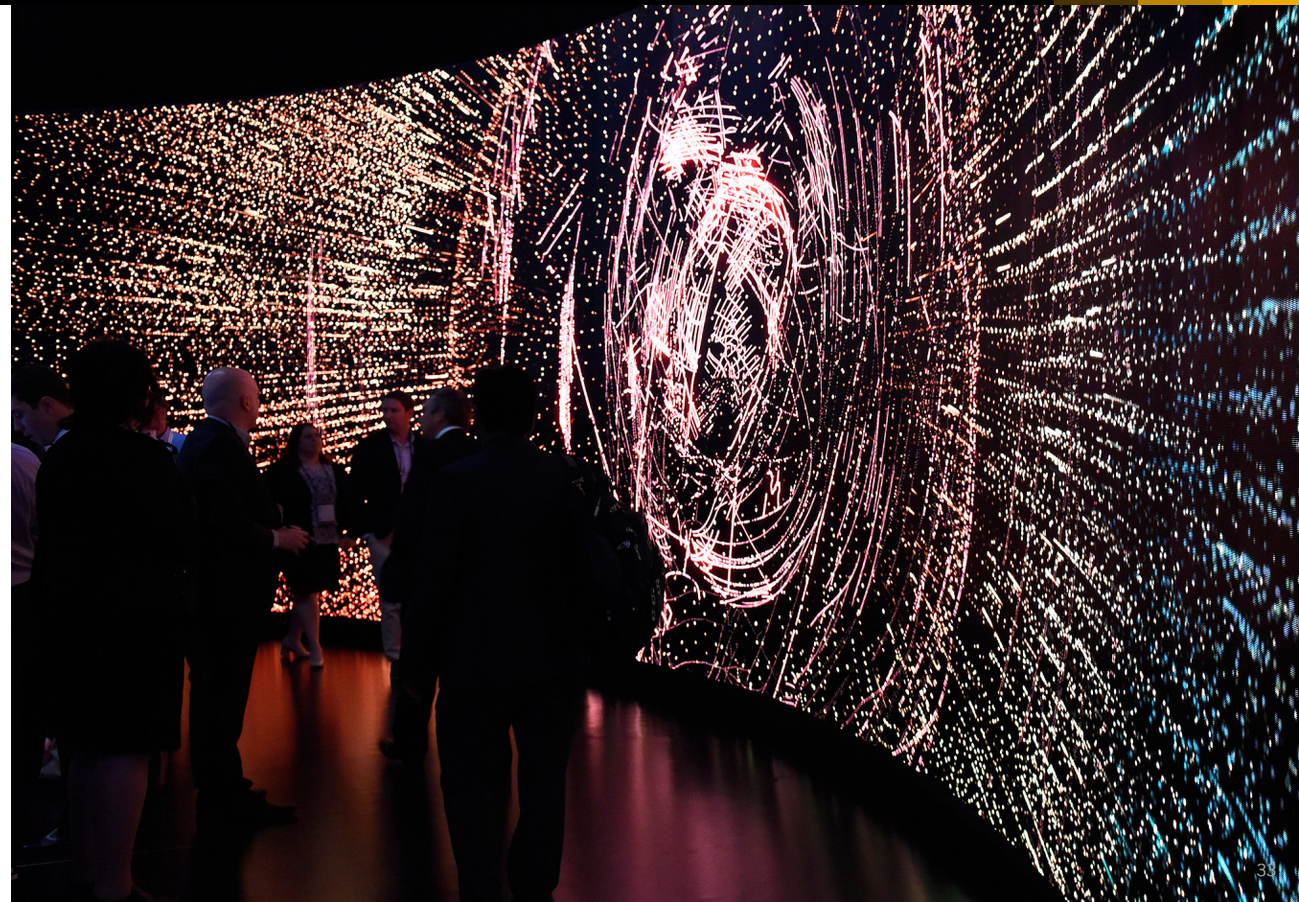

*Leonardo Live: Top Experts discuss IoT, Machine Learning and Digital Innovation with SAP Leonardo*




*Live Business powered by SAP Leonardo. Go from Knowing to Doing.*



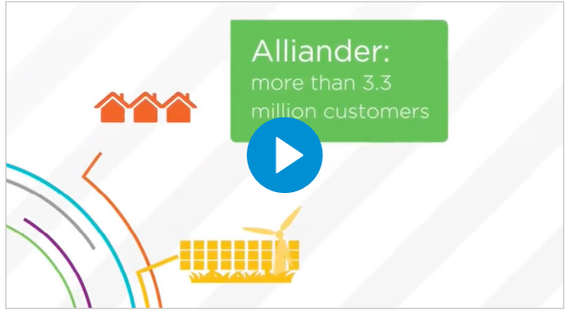
*SAP Leonardo – SAP´s Digital Innovation System*



# Explore More SAP Leonardo Success Stories



*AEGEA – Improving Water Supply with IoT and Machine Learning*




*SAP CC Sapphire Alliander V03*



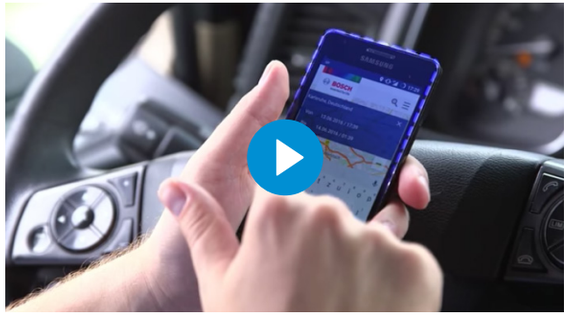

*Jabil – US Manufacturer Goes Digital with SAP*




*SAP HANA at Kaeser Kompressoren*



*Arctic Wind – Solving Arctic Challenges at the World's Northernmost Wind Farm*



*BOSCH – Keeping Truckers and their Cargo Safe thanks to BOSCH Secure Truck Parking and SAP Vehicles Network*



*NTT – How a Vest Can Save Your Life*



*Trenitalia – Creating a System of Maintenance Management Powered by SAP HANA*

# SAP Leonardo Capabilities
## & Success Stories at a Glance

| Customer | Machine Learning | Internet of Things | Blockchain | Analytics | Big Data | Data Intelligence |
|---|---|---|---|---|---|---|
| Aegea | x | x | | | | |
| Alliander | | x | | x | | |
| Arctic Wind | x | x | | | | |
| Bosch | | x | | x | | |
| Buenos Aires | | x | | x | x | |
| Fibria Celulose | | | | x | x | |
| Hamburg Port Authority (HPA) | | x | | x | | |
| Jabil | x | x | | x | x | |
| Kaesar Kompressoren | | x | | x | | |
| Mercedes-AMG | | x | | x | | |
| Meteo Protect | | x | | x | | |
| NTT Communications | | x | | x | | |
| Stara | | x | | x | | |
| Tennant | | x | | | x | |
| Trenitalia | | x | | x | | |



SAP Leonardo

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Run Simple