

Case Studies

A tour of previous applications.

Unlock Space Efficiency

Facility Type

Transload

Objective

Optimize Storage





Results Achieved

Since implementation, **TELIA** has transformed this facility into a safer, more efficient, and profitable operation. Our commitment to achieving a fully autonomous, automated environment has led to widespread improvements, demonstrating that automation is essential for maintaining a competitive edge.

68%

Storage Density Increase.

TELIA increased this facility's storage capacity by optimizing space utilization patented storage algorithms, allowing for more efficient use of resources.

80%

Turnaround Time Reduction.

TELIA streamlines the loading and unloading processes, dramatically reducing truck turnaround time and improving overall logistics efficiency.

350k

Automated Movements.

TELIA operates continuously to maximize the performance and efficiency of your equipment, ensuring you get the most out of every asset.

75%

Reduction in Workforce.

TELIA's advanced automation significantly reduces the number of personnel required per shift, streamlining operations while maintaining high productivity.

Showcase Features

2

High-Speed Automated Cranes

Two high-speed automated cranes can significantly enhance a facility's efficiency by rapidly handling and moving materials, reducing bottlenecks, and accelerating overall production processes.

3

High Coil Storage Optimization

Automation enables 3-high coil stacking, optimizing vertical space and creating higher storage density, ultimately maximizing the facility's storage capacity.

Retractable

Foot Coil Grab

A retractable foot coil grab saves space and boosts efficiency by allowing for compact storage and quick, precise handling of coils, reducing operational clutter and streamlining workflows.



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THE INNOVATORS

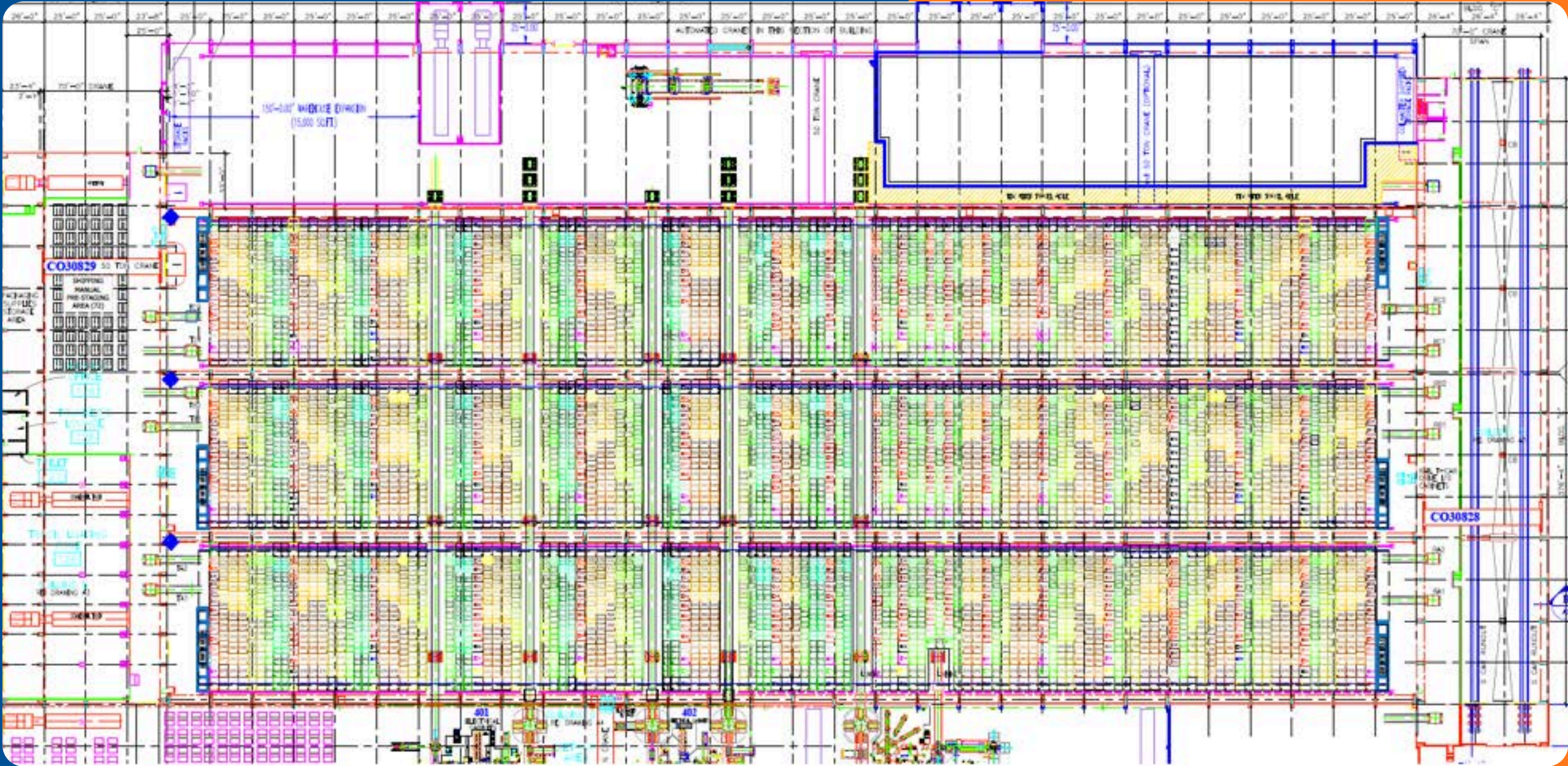
Maximize Storage

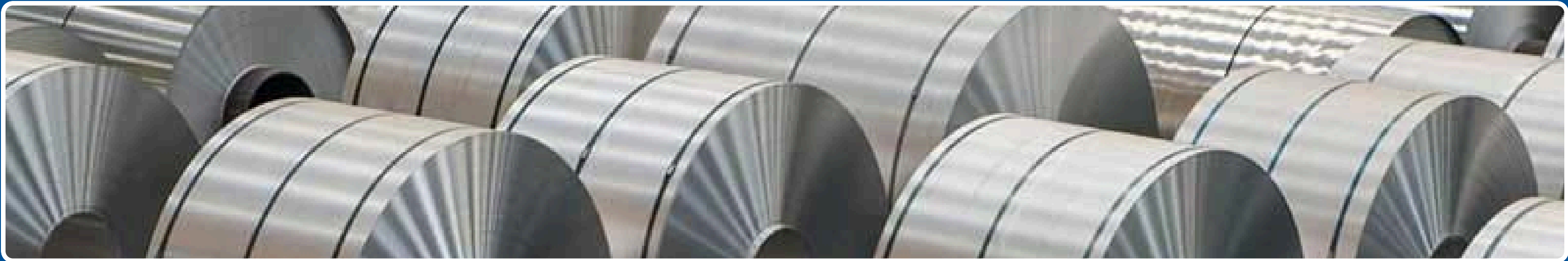
Facility Type

Toll Processor

Objective

Increase Storage





Results Achieved

With **TELIA**'s advanced automation, we increased coil capacity from 3.8k to 5k, eliminated outdoor storage, and achieved 21 million tons of velocity over five years, optimizing both space and efficiency. Along side these gains, this facility was able to create a safer environment for both their employees and their housed product.

100%

Storage consolidation.

We successfully consolidated all products under one roof, eliminating the need for third party storage, streamlining operations, improving inventory management, enhancing overall workflow efficiency, all while creating a safer facility.

21m

Tons of Product Velocity in 5 yrs.

Over five years of autonomous operation, we achieved an impressive 21 million tons of velocity, demonstrating the efficiency and reliability of **TELIA**.

32%

Storage Density Increase.

With **TELIA**'s advanced automation, we successfully increased our coil capacity from 3.8k to 5k, optimizing storage and maintaining throughput.

Showcase Features

1

Trough Style Storage System

To reduce overall CAPEX, we integrated the existing Coil Pad inserts into the automated solution, leveraging previous investments while enhancing facility efficiency.

18

Automated Assests Working in Tandem

We successfully automated 18 pieces of equipment, enabling them to work in tandem, which streamlined operations and significantly enhanced overall productivity within the facility.

Quarantine

Area Implementation

We've implemented a quarantine area in the facility, where operators can inspect coils, conduct diagnostics, and manage products that fall outside the parameters of automation.



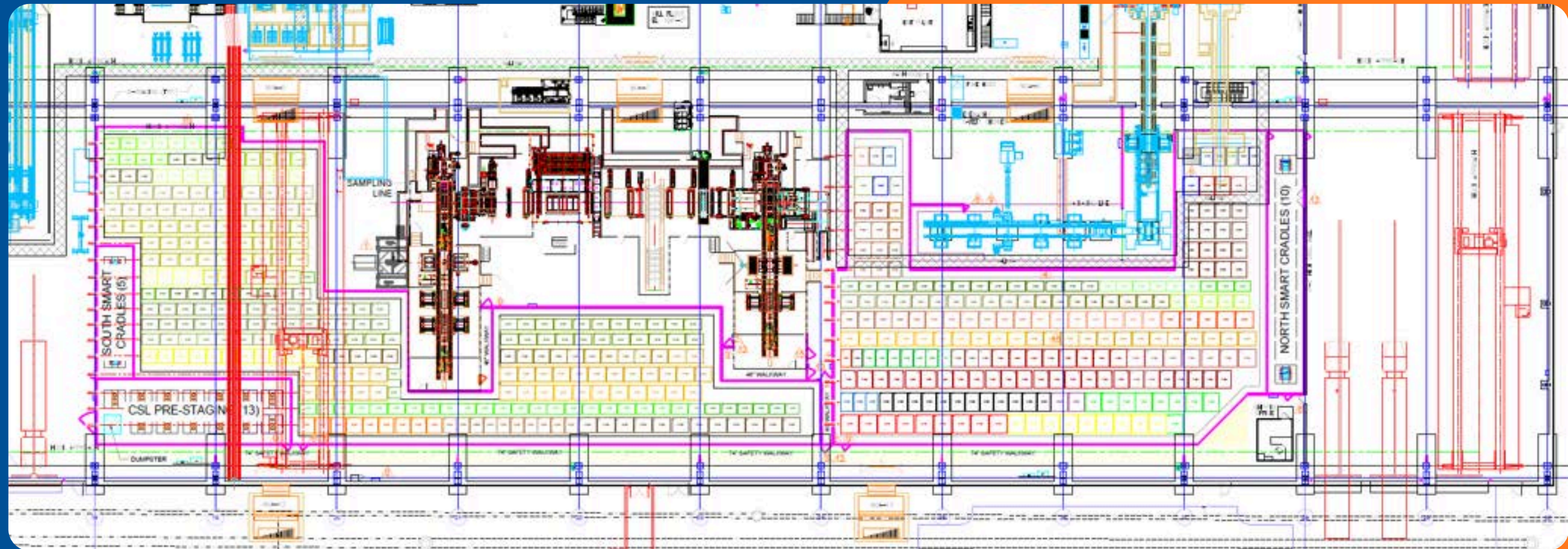
All In-House

Facility Type

Galvanizing Line

Objective

Eliminate
Outdoor Storage





Results Achieved

We achieved significant efficiency gains by automating the transition to 2 and 3-high stacking of auto-exposed product. The use of TELIA eliminated product damage and improved throughput. Additionally, we cut costs by removing the need for outdoor storage through a fully automated indoor solution and further optimized operations by increasing crane utilization.

100%

Elimination of outdoor storage

Huge gains were achieved by automating the transition from 1-high manual handling to 2 and 3-high auto-exposed product, resulting in the elimination of overflow storage & the consolidation of product under one roof.

\$2.5/T

Saved by storage optimization

We saved a significant sum of money by eliminating the need for outdoor storage space through the implementation of a fully automated indoor storage solution.

57%

Crane Utilization Increase

Significant increases in crane utilization, optimizing operational efficiency and maximizing throughput within the facility were realized.

Showcase Features

Retractable

Foot Coil Grab

A retractable foot grab saves space and enhances storage optimization by allowing for compact, flexible use of storage areas while minimizing obstacles and maximizing available room.

Re-Use

of Existing KLP Saddles

Recycling the KLP saddles demonstrates our technology's ability to adapt seamlessly to existing infrastructure, showcasing its flexibility and commitment to malleability.

Guarded

Interlocked Barriers

Fully guarded and interlocked barriers create a safer working environment by preventing unauthorized access and minimizing the risk of accidents and injuries in storage bays.



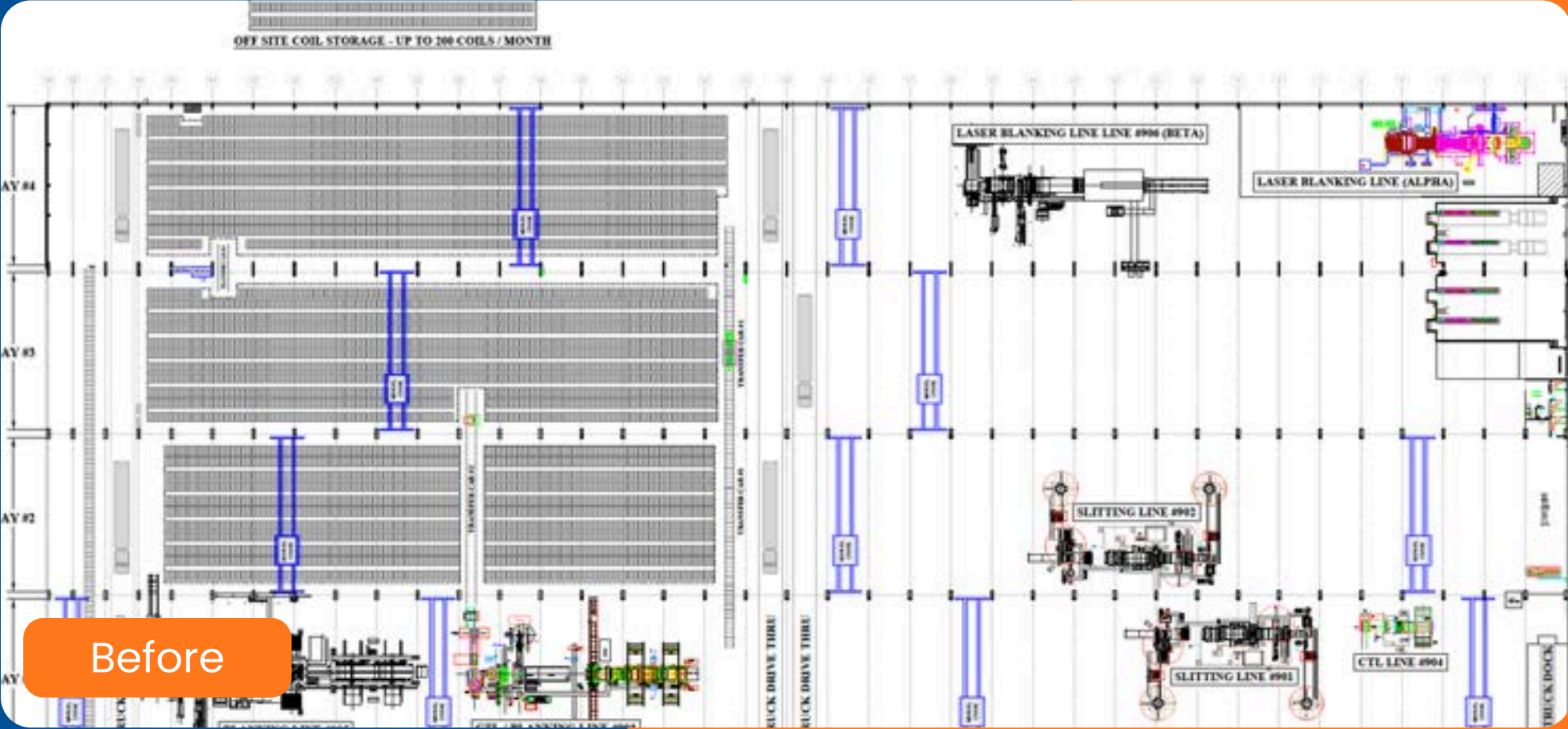
Expansion Free

Facility Type

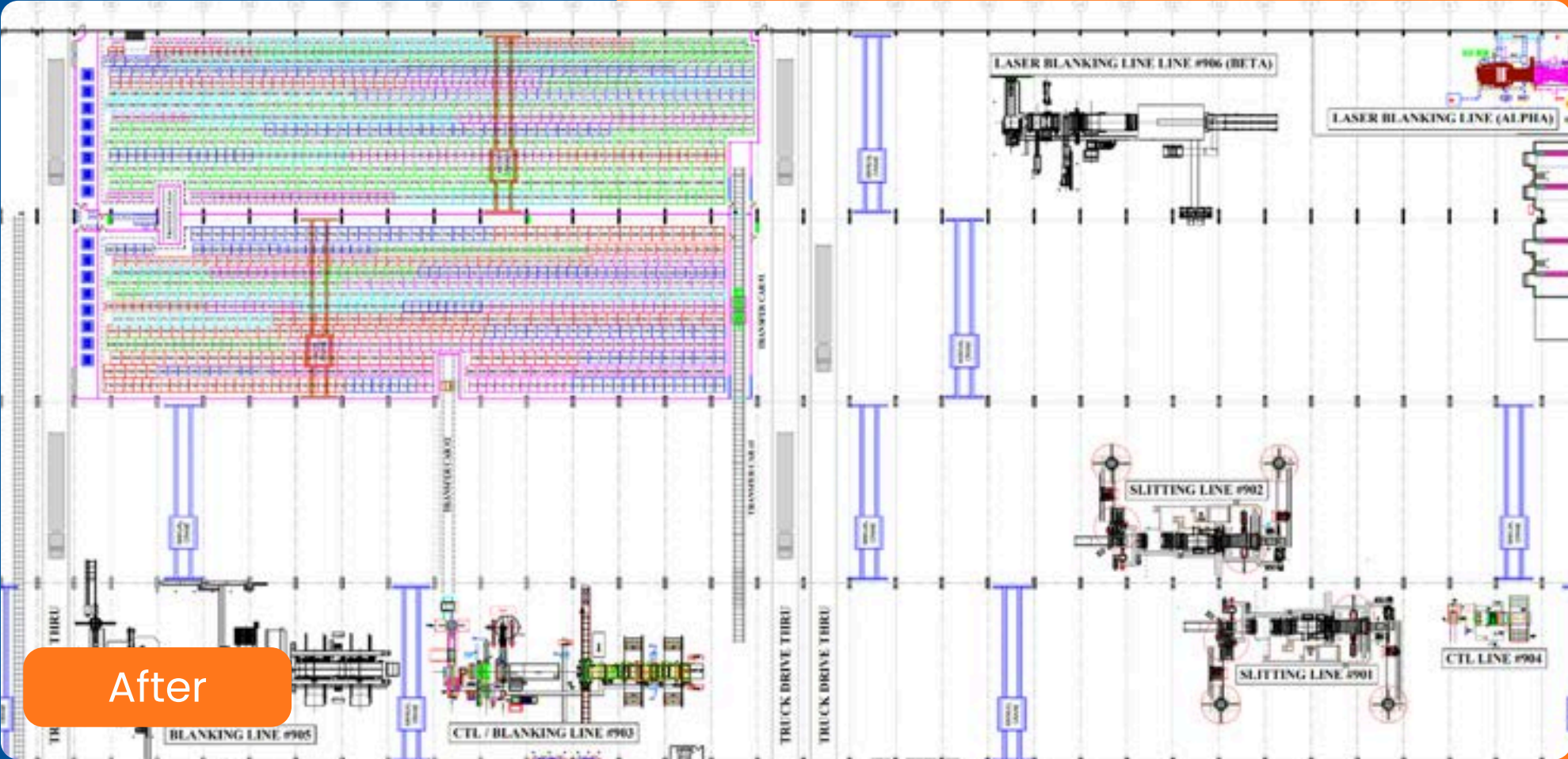
Toll Processor

Objective

Offset Building
Expansion



Before



After



Results Achieved

This facility was overflowing with product and on the verge of expanding, but with TELIA's storage optimization, CareGo increased storage density and reduced the footprint from 3 bays to 2, eliminating the need for additional building space. Remarkably, this was achieved while also delivering a 200% increase in throughput, further enhancing the facility's efficiency and capacity.

2 Bays

Condensed 3 bays into 2.

Implementing an automated solution not only reduced storage from three bays to two, but also eliminated the need for outside storage, eliminating recurring monthly storage expenses for 150 to 200 coils per month.

\$9.8m

Saved by eliminating expansion.

Saved nearly \$10 million by condensing storage from 3 bays to 2, significantly reducing the need for additional infrastructure and optimizing space utilization.

200%

Increase in throughput.

Through automation and optimized workflows, this facility experienced a drastic increase in throughput, greatly enhancing its productivity and overall efficiency while decreasing product damage.

Showcase Features

2

High Speed Cranes

Having 2 high-speed cranes significantly boosts the facility's efficiency by enabling simultaneous, rapid handling of materials, which accelerates operations and increases overall throughput.

3-High

Optimized Coil Stacking

Stacking coils 3-high, paired with the use of TELIA's Mountain and Laneway storage logic, helps save space by maximizing vertical storage capacity, reducing the facility's footprint and optimizing overall space utilization.

Cross Bay

Automated Transfer Cars

A cross-bay transfer car enhances throughput by efficiently moving materials between different bays, streamlining the flow of goods and reducing handling time.

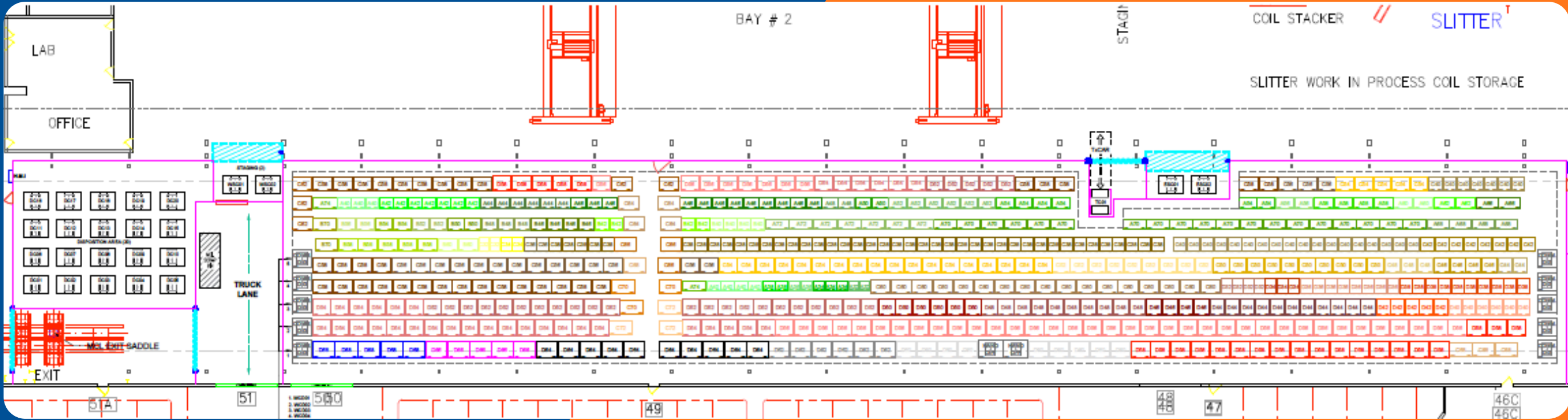


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Maximize Storage

Facility Type
Galvanizing Line

Objective
Improve Storage
Density





Results Achieved

By eliminating forklifts and combining B Bay's 213% and Bay 1's 365% increases in storage density, we achieved a 578% improvement in capacity and space utilization. TELIA's capability to autonomously rotate coils to the correct orientation for processing or storage further streamlines handling, while optimized speed curves and advanced grab design reduce product damage and OPEX. Autonomous cranes operate more consistently, enhancing efficiency and maximizing throughput.

578%

Combined capacity increase in two bays.

By eliminating the need for forklifts, merging B Bay's 213% and Bay 1's 365% increases in storage density, we achieved a combined 578% improvement, significantly enhancing capacity and optimizing space.

600k

Saved per annum in product damage.

We achieved substantial OPEX savings by reducing product damage through the use of optimized speed curves and advanced grab design, which minimized handling errors.

73%

Increased Crane Utilization

Autonomous cranes are used more effectively by continuously operating without manual intervention, enhancing operational efficiency and maximizing throughput.

Showcase Features

2 & 3-High

Optimized Coil Stacking

The 2 and 3-high stacking of auto-exposed coils optimizes vertical space, allowing for greater storage density and more efficient use of facility space.

Recycling

KLP Saddles

Recycling KLP saddles demonstrates our commitment to sustainability and resource efficiency by repurposing existing components within the existing facility systems.

Retractable

Foot Coil Grab

The retractable foot grab with a built-in rotate and directed reeved sheave nest enhances operational flexibility and safety by allowing precise handling and efficient movement of materials.



Efficient Workflow

Facility Type

Service Center

Objective

Improve
Throughput





Results Achieved

After implementation, our automated solution significantly improved operational throughput by enabling a full shift's worth of production to be pre-staged during the off shift. Additionally, we increased single-bay storage capacity by 43% and boosted total tonnage stored by 59%, underscoring our commitment to safe, efficient automation.

43%

Increased single bay storage density.

We increased storage density by 43% and boosted tonnage by 59%, significantly enhancing space utilization and overall capacity, which contributed to more efficient operations and greater throughput.

3 to 6

Minute truck turnaround time.

After implementation, we achieved faster truck turnaround times by unloading directly onto an automated transfer car, streamlining the process and reducing delays.

99%

Reduction in product damage.

We reduced OPEX by minimizing operators per shift, decreasing product damage, and transforming the facility into a lights-out operation, which significantly enhanced efficiency and cost-effectiveness.

Showcase Features

1

Automated Over Head Crane

Having a single overhead crane optimizes space and streamlines operations, providing efficient and centralized material handling within the facility.

2

Transfer Cars

With 2 transfer cars facilitating shipping and cross-facility movement of product, we streamlined logistics and improved overall operational efficiency.

25

Staging for Production Cradles

Having 25 staging cradles allows for a smoother workflow by providing prestaging for next days production, highlighting TELIA's ability to work during off-shifts & driving operational throughput efficiency



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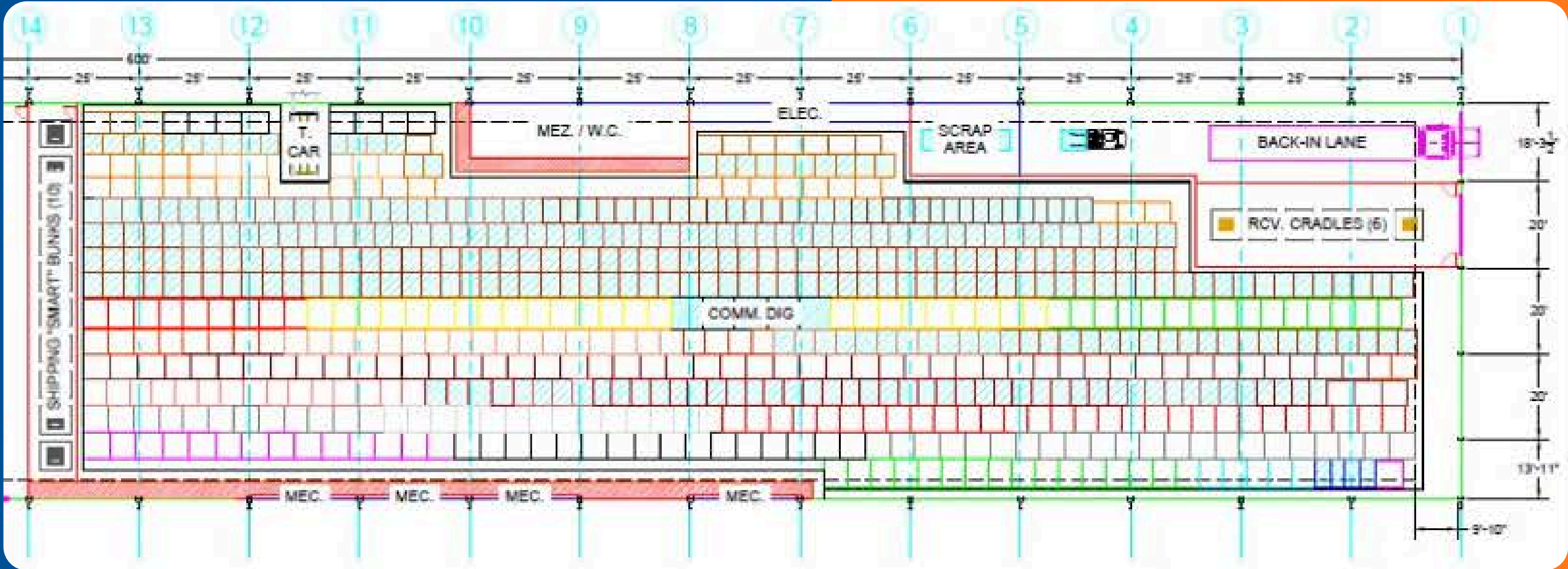
Precisely Placed

Facility Type

Service Center

Objective

Optimize Storage





Results Achieved

By increasing coil density by 52% in half of the bay, we consolidated storage to house 1,538 coils within 21,783 cubic feet, reducing reliance on two buildings. This facility was using a third party for their storage overflow but after implementing an autonomously automated solution, all product was able to be stored under one roof, eliminating need for any cross-facility product transportation.

52%

Coil density increase into half bay.

Increased coil density by 52% in half of the bay, efficiently housing 1,538 coils within 21,783 cubic feet. This improvement consolidates storage, reducing the need for two separate buildings that previously held 846 coils.

100%

Decrease in cross-facility transport.

By consolidating storage we completely eliminated cross-facility product transportation by consolidating our storage processes into a centralized system.

15min

Average truck turnaround time.

Implementing an automated solution with dedicated staging areas for ready-to-ship products has led to a significant reduction in truck turnaround time, enhancing overall logistics efficiency.

Showcase Features

1

Automated Over Head Crane

Having a single overhead crane optimizes space and streamlines operations, providing efficient and centralized material handling within the facility.

2

Transfer Cars

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Rotate

Coils For Simplified Processing

TELIA ensures precise coil orientation for seamless processing by recording the coil's position upon receipt and autonomously rotating it to the correct alignment before loading onto the line.

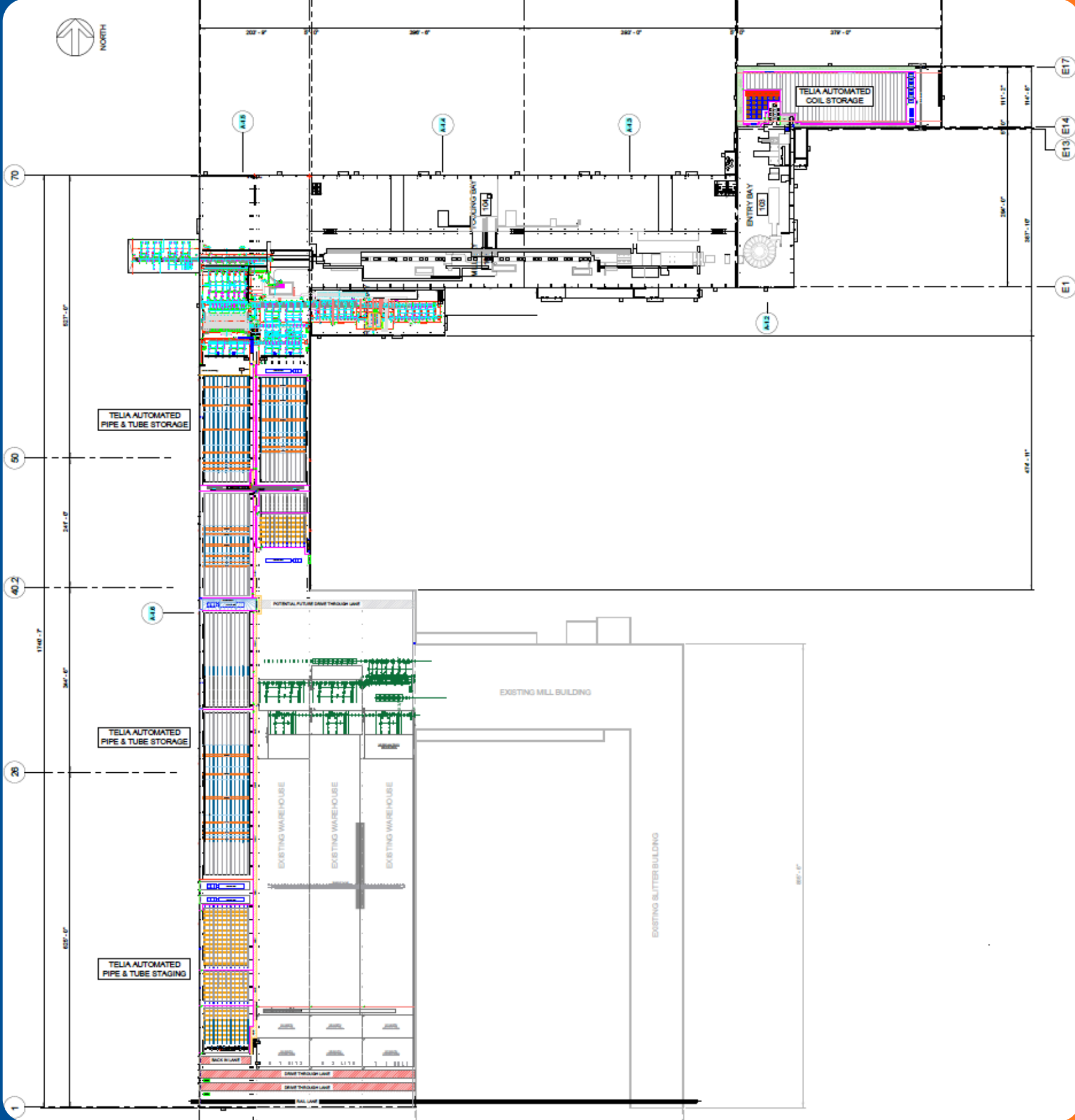


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Up To Date

Facility Type
Toll Processor

Objective
Modernization





Results Achieved

We modernized and future-proofed the facility, increasing storage density by 170% and reducing truck turnaround time by 82%. Our innovative upgrades included an advanced dual-crane system and the installation of North America's first magnetic coil lift, revolutionizing material handling. These enhancements not only boost productivity but also showcase our commitment to continuous improvement and industry leadership.

800+

Tons of automated throughput per day.

Successfully maintained all flow and throughput requirements from both mills by automating processes, ensuring seamless staging and shipping of over 800 tons per day - creating a modern example of what a facility could be.

170%

Increase in storage density

We achieved a remarkable increase in storage density by 170%, by optimizing vertical space utilization and enhancing overall operational efficiency by condensing the existing footprint.

82%

In truck turnaround time.

After implementing an automated staging, product was always ready to go on time, therefore significantly streamlining logistical efforts across all product types and decreasing truck turnaround time by 82%.

Showcase Features

Magnetized

Installed North America's First Magnetic Coil Lift

We installed and fully automated North America's first magnetic coil lift and dual magnet for pipe & tube, revolutionizing material handling by enhancing both safety and efficiency in product transportation.

3-Bay Transfer Car

Our 3-bay transfer car streamlined operations by creating fluidity between bays and channeling products to a single staging area, simplifying the truck loading process.

Staging

To Improve Logistics.

With **TELIA**, the facility now automatically identifies and selects the optimal product for staging and shipping, simplifying the process for long products.

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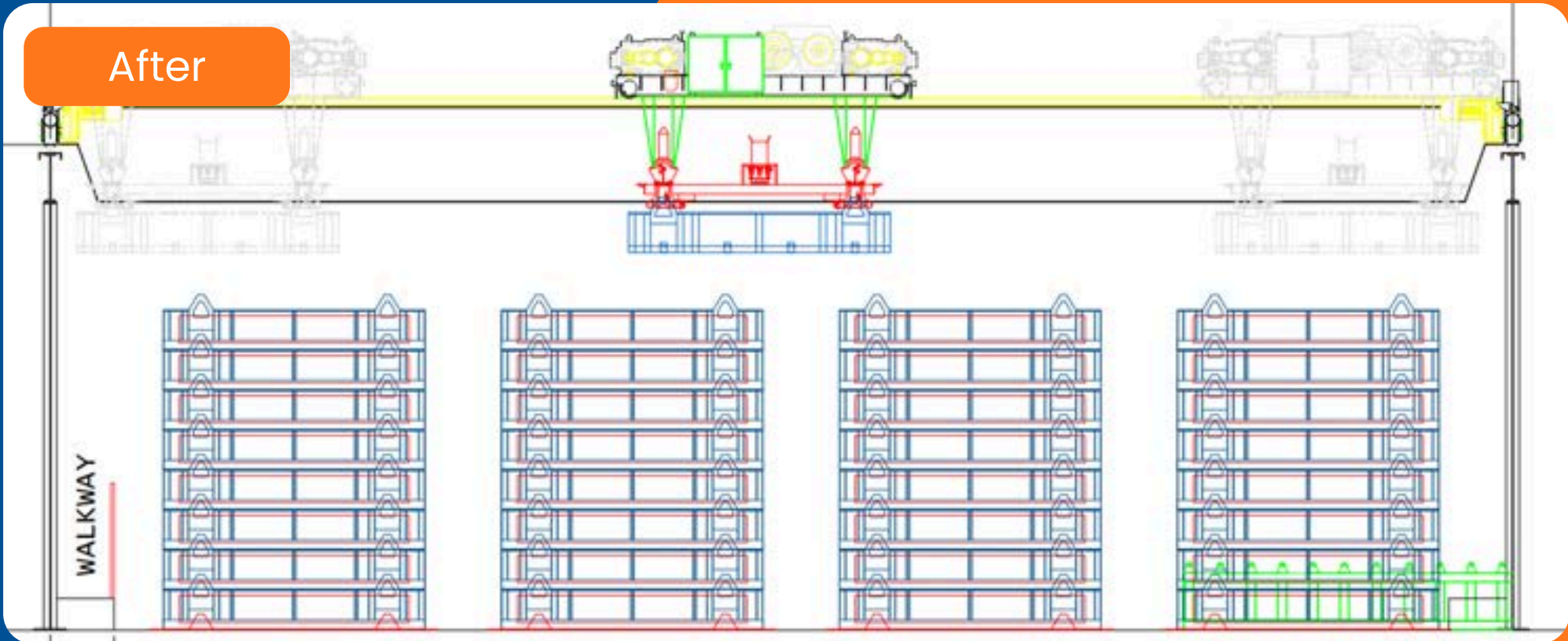
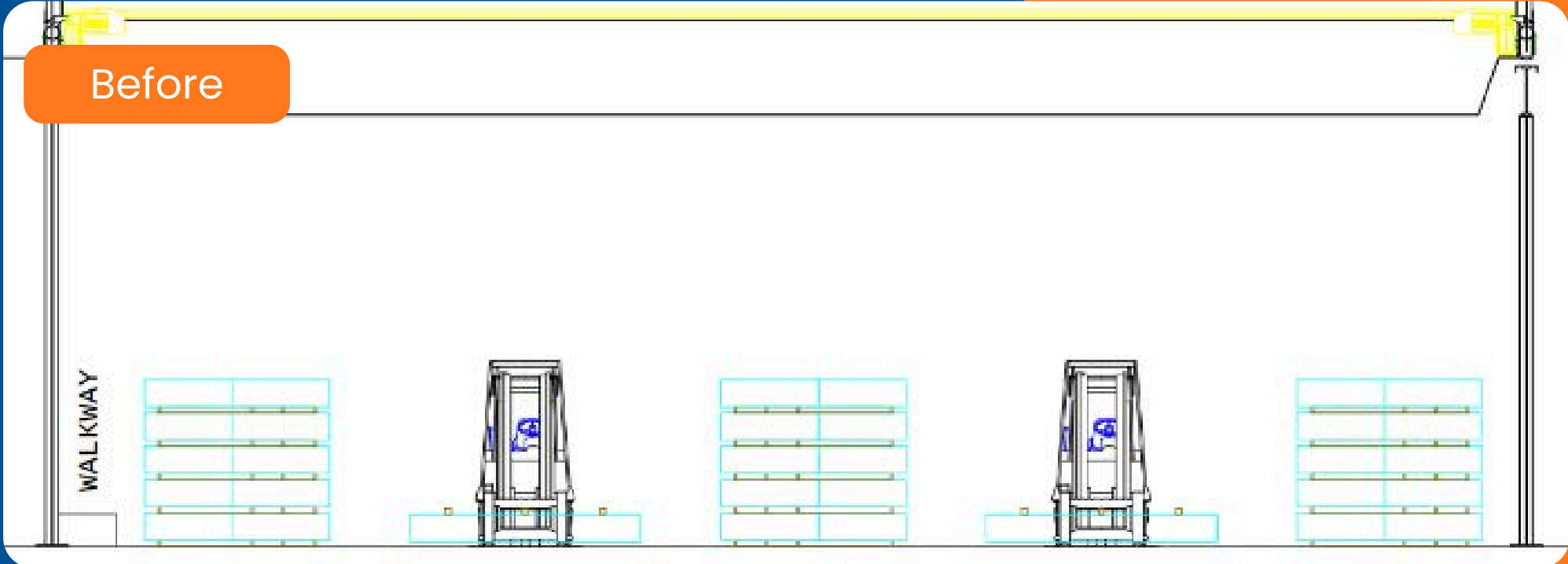
Precision in Motion

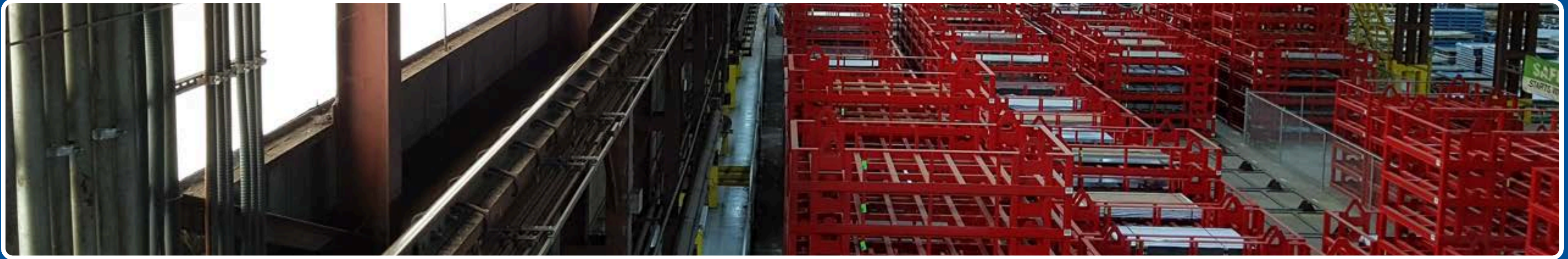
Facility Type

Service Center

Objective

Consolidation





Results Achieved

Initially, cut-to-length material was made to order, causing variable bundle sizes and frequent coil change-overs, which lowered throughput and utilization. Automation shifted to full coil runs, producing stock bundles and improving efficiency. To fulfill specific orders, a cassette system was integrated with an automated bundle-splitting area, allowing efficient counting, splitting, and re-stocking based on order needs, supporting seamless storage and retrieval.

250%

Increased storage density.

Through consolidating the facility's storage footprint, we eliminated the need for an expansion. By bringing all product under one roof and automating processes, this operation saw several magnitudes of storage density gains.

30%

Increased in throughput.

The custom cassette design boosted throughput by enabling faster, more organized stacking, retrieval, and loading, minimizing handling time and maximizing flow efficiency.

2

Facilities consolidated.

By eliminating forklifts, taking advantage of vertical space and implementing cassettes and automating workflows, we saved valuable floor space and streamlined operations, allowing us to consolidate two facilities into one efficient location.

Showcase Features

Automated

Stacking with Cassettes

Stacking cassettes optimizes vertical space, allowing for higher-density storage and maximizing facility capacity while remaining in the same footprint.

Transfer Car Integration

Automated Intralogistics

Automating the feed to our splitting and packaging line streamlined the workflow, significantly accelerating shipping turnaround times and enhancing overall efficiency.

6 Forklifts

Eliminated

Eliminating six forklifts freed up valuable floor space, allowing for increased storage density and more efficient use of the facility's capacity.



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