

# ACCELERATING AUTOMOTIVE MANUFACTURING

WITH CONFIGURATION  
LIFECYCLE MANAGEMENT

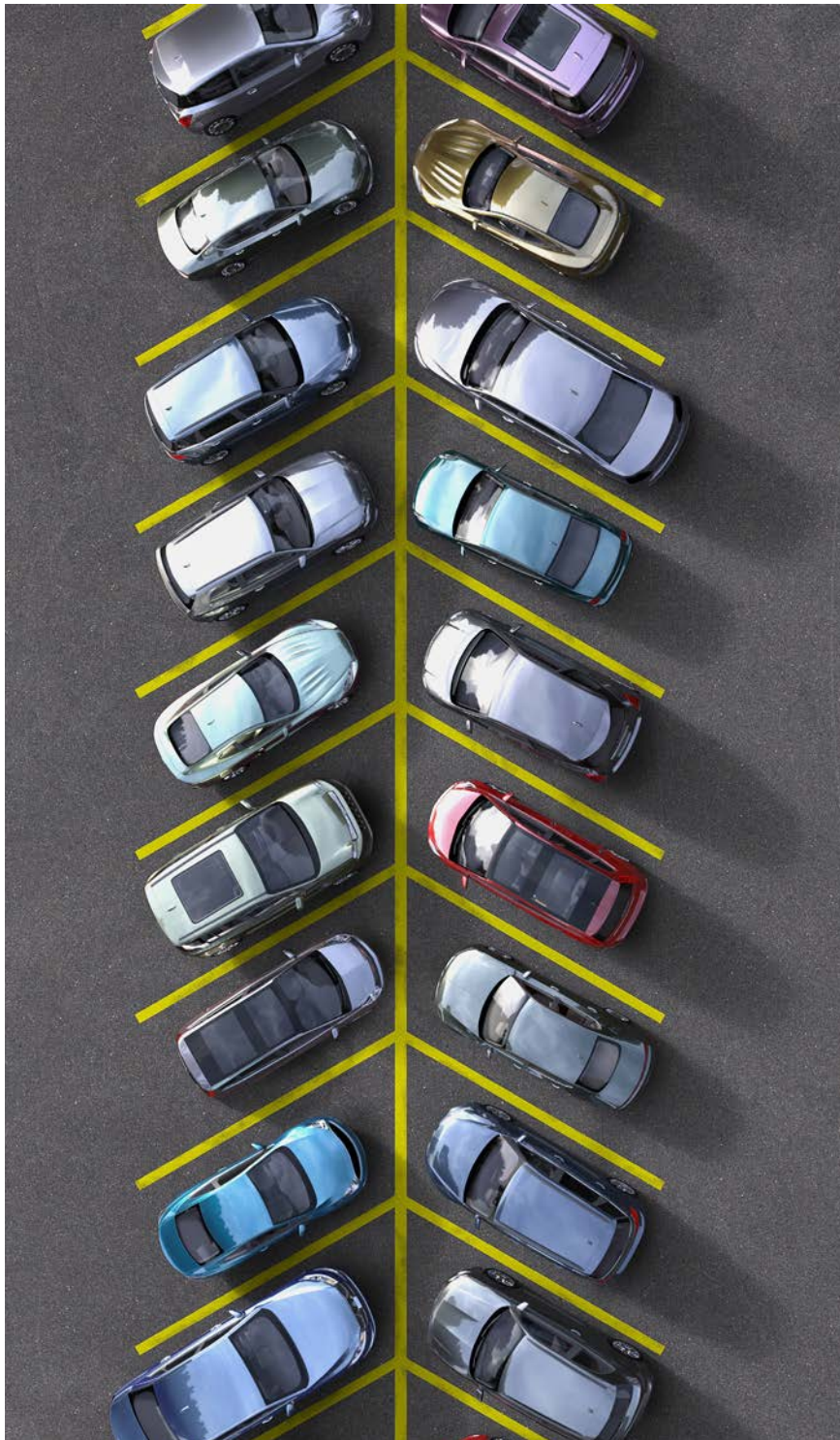
Configit®



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# Challenge | Customers Are Redefining When, Where, And How Cars Are Sold

## Amazon Is Reinventing The Buying Experience

Two-click ordering, Dash buttons, mobile apps for streaming video, and an ever-widening array of Amazon Prime Services are raising customer expectations for greater responsiveness, speed, and scale with every item they buy.

More vehicle customers than ever before want the freedom to:

- Decide where, when, and how they will buy the car they most prefer.
- Not be constrained by the models in a given dealer's lot, having to compromise rather than getting the car they really want.
- Have a positive buying experience where they are in control and their time is valued.
- Have the opportunity to virtually experiment with colors, form factors, models, accessories, and engines.



## Challenge | New Vehicle Models Are Proliferating Yet Customers Aren't Finding What They Want

### Despite An Unprecedented Number Of New Vehicle Models Released Every Year...

- Worldwide light vehicle sales are projected to increase only 2.5% by 2020, according to AlixPartners and Consultancy UK.
- North American auto manufacturers are having to offer a record \$3,700 per vehicle to sell one in 2018, according to PriceWaterhouse-Coopers auto research.
- U.S. car sales dropped from 7.1 million units in 2016 to 6.3 million in 2017, an 11.27% drop in just one year, according to AutoData.
- The average global auto manufacturer will launch 15+ new models next year, counting on them to deliver new revenue and margin growth with only a few models breaking even and delivering profits.

**Bottom Line:** It's an auto buyer's market today and manufacturers need to play closer attention to their requirements, and redefine product lifecycle strategies that can flex to new buyer's requirements.

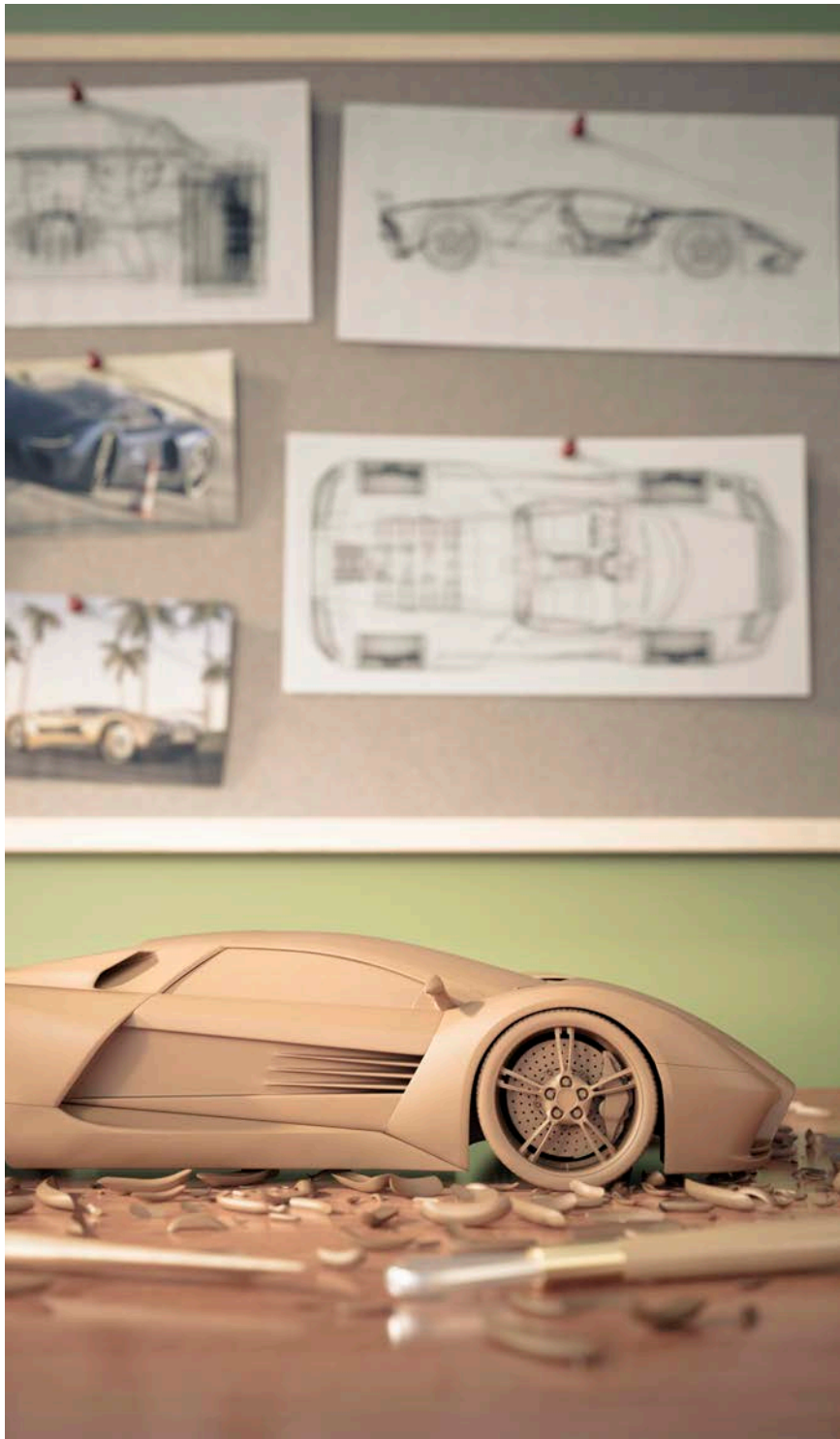
# Challenge | Configuration Gaps Are Slowing Down Sales

The answer to improving auto sales isn't proliferating product options across all models.

**Instead, the focus needs to be on closing configuration gaps that are being created by the proliferation of product options and configurations.**

Engineering creates a series of configurations in PLM systems, manufacturing creates their versions in ERP systems, and marketing and sales interpret and define configurations in CRM systems.

These configuration gaps between PLM, ERP, and CRM systems lead to inaccurate product configurations being sold, order cancellations, delays, lost sales, and lower customer satisfaction.

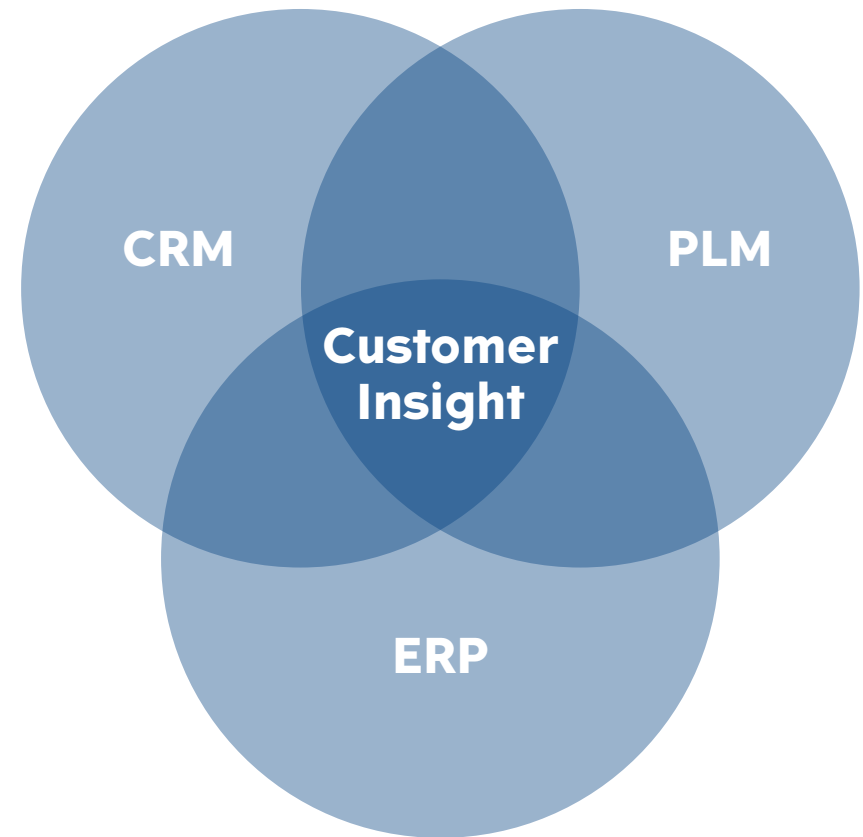




# **Solution | How Taking A Lifecycle Approach To Configuration Management Helps Close Gaps And Drive Sales**

## **Configuration Lifecycle Management (CLM)**

- Assists automotive manufacturers in eliminating duplicate product configurations and closing configuration gaps that lead to lost sales.
- Taking a lifecycle approach to product configuration that integrates PLM, ERP and CRM creates a foundation to scale product configurations accurately across all selling channels, including online.
- The more integrated every system is that relies on product configuration, the greater flexibility in fulfilling orders, faster customer response, control over costs, and higher profits.



# Implementation | Comparing CLM Approaches

	PLM	ERP
Objective	Aggregate product knowledge management	Ensure business & mfg. process requirements are met
Focus	Strong project-first focus can make PLM inflexible	Transaction-first focus limits production flexibility
Time Orientation	Time-to-market and product launch dominate	Time-to-customer & perfect order performance (accuracy)
Modeling Parameters	Primarily technical, engineering constraints	Supply chain, transaction and commercial constraints
Configuration Scope	Engineering-driven technical features dominate	Product features prioritized by commercial viability



	Configuration Lifecycle Management
Objective	Support the entire product configuration lifecycle, spanning engineering and production, to deliver exactly what a customer orders, on time and in perfect condition.
Focus	Creates a single, unified product configuration data platform that supports engineering, marketing, sales, and production product configuration needs.
Time Orientation	Flexes to support both time-to-market (PLM) and time-to-customer (ERP).
Modeling Parameters	Enables auto manufacturers to collaborate more effectively by supporting both technical and commercial product models and parameters to increase accuracy and responsiveness.
Configuration Scope	360 degree view of an auto manufacturer's entire configuration process workflows across all production centers, integrating technical and commercial product features.

# Implementation | Setting The Right Requirements For CLM

## Sales Success And Revenue Growth With CLM Starts With These 10 Requirements

Ensure your CLM strategy helps to close configuration gaps, increasing sales of assemble-to-order, build-to-order, and configure-to-order vehicles.

1. Design in support for order, production, and services configuration.
2. The ability to create nested configurations that provide contextual intelligence of their structure, unifying technical and commercial product constraints in a single data taxonomy or structure.
3. Design in features and rules effectivity by product line, ensuring each product configuration lifecycle is 100% accurate and a scalable system of record across all of manufacturing.
4. Robust catalog and content management that provides a one-to-many publishing platform for propagating product configuration definitions across all applicable direct and indirect sales channels.
5. The ability to verify rule and constraint integrity in real-time as customers build configurations across any selling or service platform.
6. Clear, well-designed change control processes and systems including support for Engineering Change Orders (ECOs) and release management that validates configurations across PLM, ERP and CRM systems to ensure only the most buildable, and profitable are sold.
7. Consistent feature availability across all product models at all times, predicated on PLM and ERP effectivity of saleable product configurations.
8. Support for configuration model audits to the Bill of Materials (BOM) and work instruction level on shop floors to ensure the highest percentage of perfect orders are produced.
9. Offers the flexibility of rule inheritance from related product models, saving valuable time in launching new products.
10. Developed, tested, and readily available Application Programming Interfaces (APIs) that enable CLM to scale quickly and reliably.



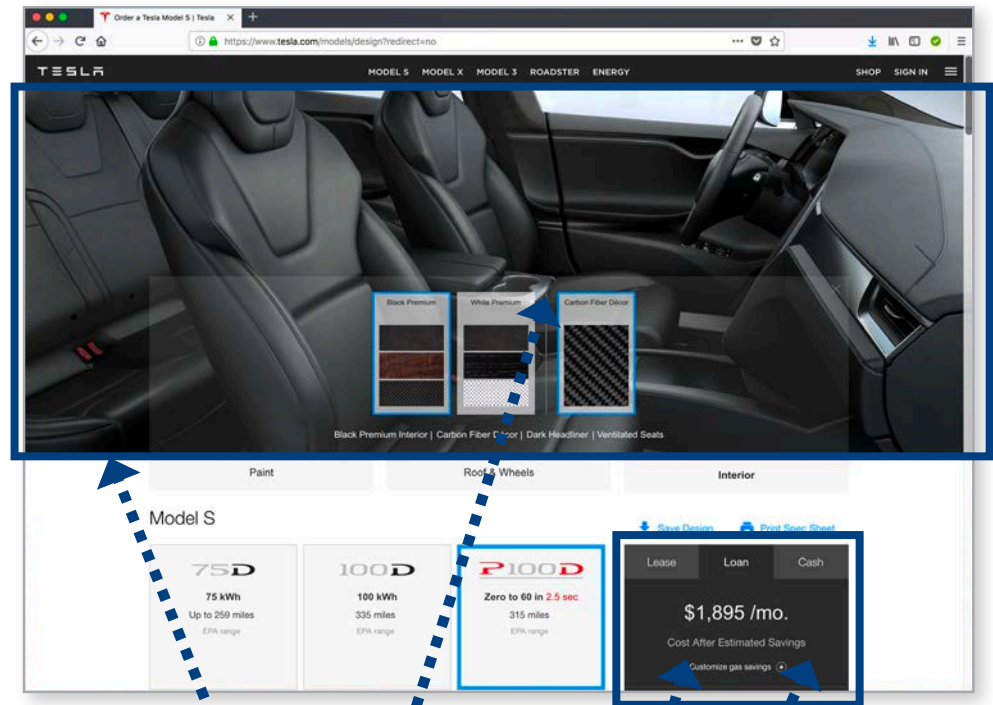
# Implementation | Scaling Product Strategies Faster For Customer Requirements

## Product Models Now Scale Across All Channels Only Displaying Highest Margin Accessories And Options

When the right requirements are in place for a CLM system, the following happens to the customer experience:

- Customers aren't overwhelmed with options; they only see the ones you choose to present.
- Options can be selected based on personalization of the shopping experience via e-commerce, buildability considerations, and profitability (majority of the time this is the leading factor).
- Sales cycles accelerate, more vehicles are sold, and a higher percentage of perfect orders are delivered!

## APIs in CLM Cloud



Configuration

Content Management

Pricing

Scheduling

Calculations e.g.,  
weight and CO<sub>2</sub>

# Implementation | CLM Platforms & APIs Flex To Customer Requirements

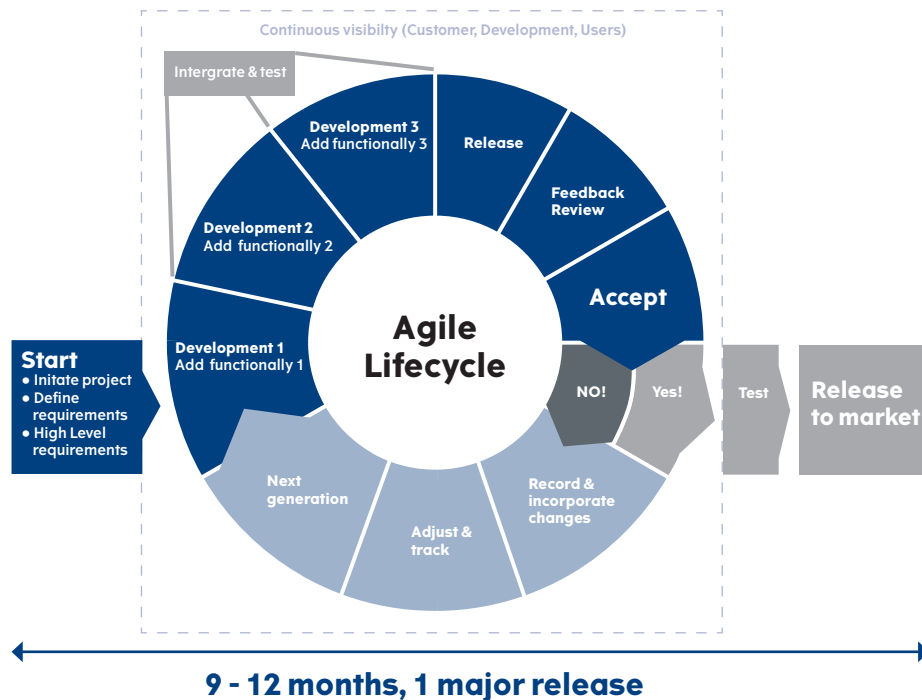
## Intelligent APIs Are The Future Of Product Configuration And CLM

In the ongoing debate between any given auto manufacturer's IT, engineering, marketing, and production teams, the following truths are beginning to emerge:

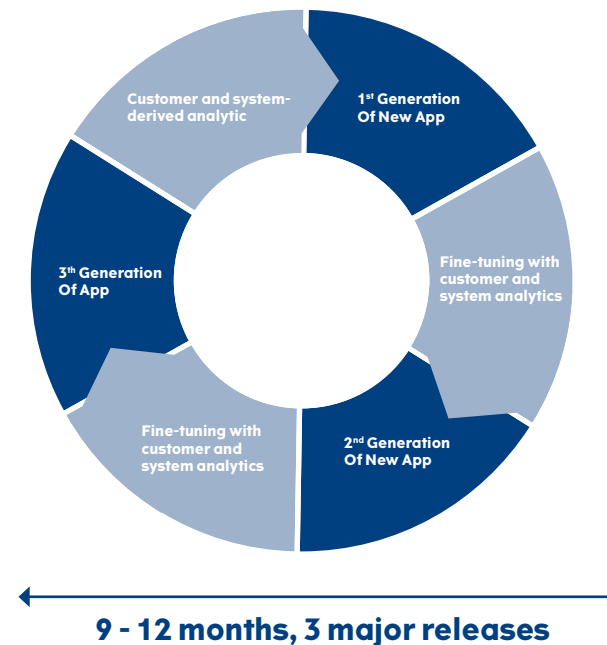
- Legacy app development approaches aren't scaling quickly enough to accurately deal with the proliferation of customizable product models.

- The time-to-market for any new product configuration app needs to be under 3 months to be relevant and competitive.
- Application Programming Interfaces (APIs) are redefining the product configuration and CLM landscape and are now essential for staying competitive in global automotive manufacturing.

### Product Configuration App Development With Legacy Development Tools



### With Intelligent APIs



# Benefits | Increased Revenue With Configuration Lifecycle Management

## Closing Product Configuration Gaps Makes More Sales Happen

By enabling product configuration to be more interactive, intuitive, and based on configuration lifecycles that include only the most buildable and profitable configurations, customers only create the most valuable vehicles for themselves and the auto manufacturer.

The best auto configurators based on CLM bring greater simplicity to the configuration process and hide the complexity of algorithms, rules, and product models from buyers, further delivering an excellent experience.

A lifecycle approach to product configuration streamlines the customer experience of configuring their ideal car. When a customer chooses a given option, the configuration logic or engine validates it before allowing the next choice to be made.

Scale New Business Models	Accelerate Time To Market	Simplify Deployment Options	Monetize With Insights
<ul style="list-style-type: none"><li>• API first integration strategy</li><li>• Deliver lowest operational cost</li><li>• Deliver best customer experience</li><li>• Drive new busniess e.g. IOT</li></ul>	<ul style="list-style-type: none"><li>• Simple &amp; fast onboarding of new production services</li><li>• Make CLM a market standard</li><li>• Lead multiplant orchestration</li></ul>	<ul style="list-style-type: none"><li>• Flexible operational models</li><li>• Choose the best possible production strategy</li><li>• Provide integration frameworks to key external systems</li></ul>	<ul style="list-style-type: none"><li>• Run more intelligent business with data insights</li><li>• Integrate across the CLM platform</li><li>• Drive revenue growth across all channels</li></ul>



# Benefits | CLM Delivers Value Across The Enterprise

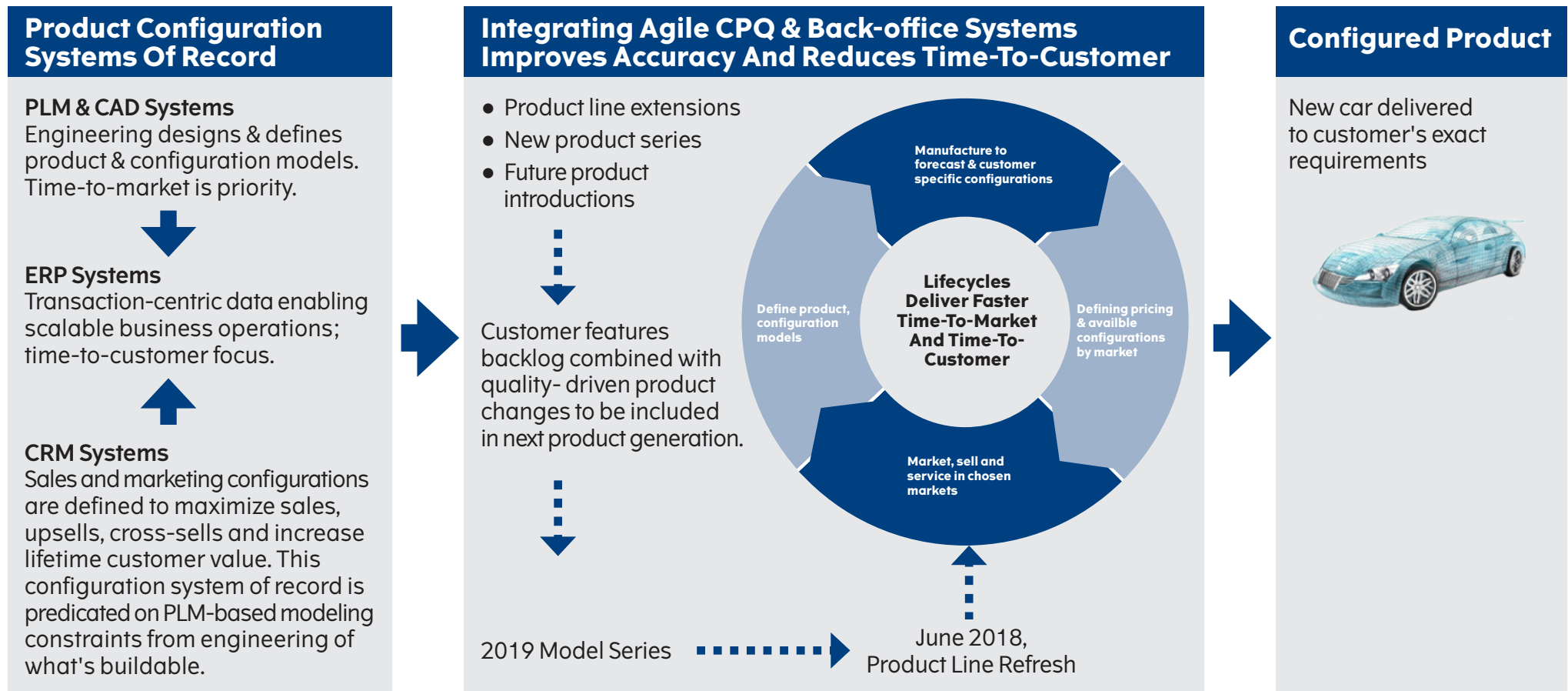
CEO	VP Channel Strategy	VP Marketing	CIO
<p>The CEO's top concern is increasing vehicle sales by driving rapid digital business innovation while at the same time ensuring the security, scalability, and stability of the business globally.</p> <p>Biggest challenges CLM addresses:</p> <ul style="list-style-type: none"><li>• Making data accessible across all vehicle product configuration platforms.</li><li>• Open up new platforms for selling including cloud and/or support innovations including mobile devices.</li></ul>	<p>The VP Channel Strategy's top concern is making sure channel alliances and partnerships meet and exceed partner revenue goals for all vehicles.</p> <p>Biggest challenges CLM addresses:</p> <ul style="list-style-type: none"><li>• Managing partner commerce on a single unified cloud platform that scales across all channels.</li><li>• Need greater accuracy on promotions and rebate management roll-outs and executions including real-time alerts on exceptions.</li></ul>	<p>The VP Marketing's top concern is pipeline generation and campaign execution and coordination to sell as many vehicles as possible.</p> <p>Biggest challenges CLM addresses:</p> <ul style="list-style-type: none"><li>• Selectively defining product, service, and pricing bundles by region, market, and segment.</li><li>• Speed of rolling out new international E-Commerce sites specific to a given regions' unique marketing requirements.</li></ul>	<p>The CIO manages all aspects of IT infrastructure including PLM, ERP, and CRM systems that CLM relies on.</p> <p>Biggest challenges CLM addresses:</p> <ul style="list-style-type: none"><li>• Orchestrating all systems to ensure product goals are met on time and at the highest quality possible.</li><li>• Ensure data validity and security across every enterprise system.</li><li>• Drive new application development with APIs and web service to shorten time-to-delivery across the auto manufacturer.</li></ul>

# Benefits | Creating Amazon-Like Buying Experiences

## Selling Cycles Accelerate And Configure-Price-Quote Strategies Meet Their Objectives

CLM systems generate selling momentum by incorporating the most valuable technical, transactional, and customer data into a single, scalable system of record that is fine-tuned to deliver faster time-

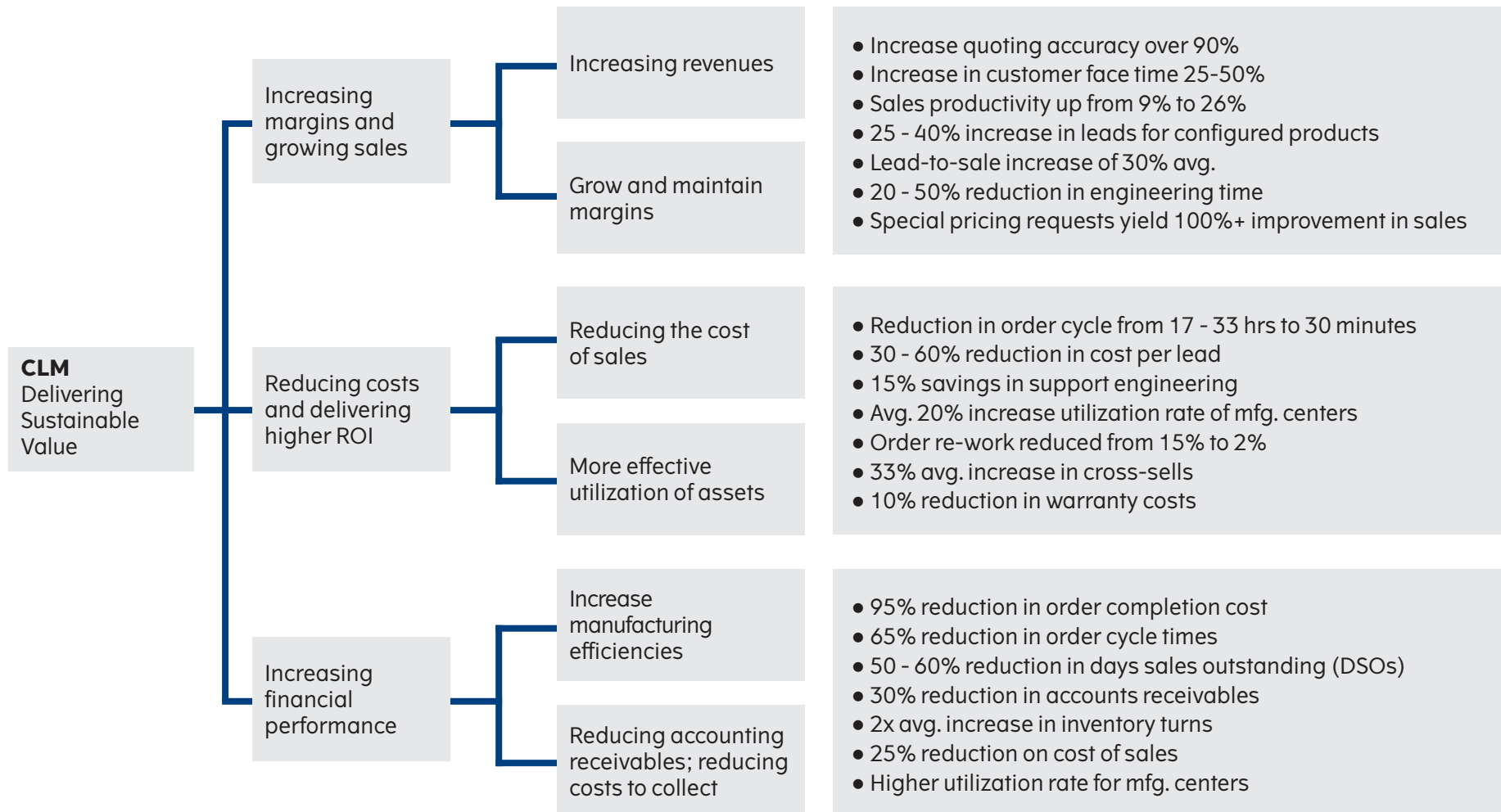
to-market for new vehicles and shortened time-to-customer on every vehicle order sold and delivered.



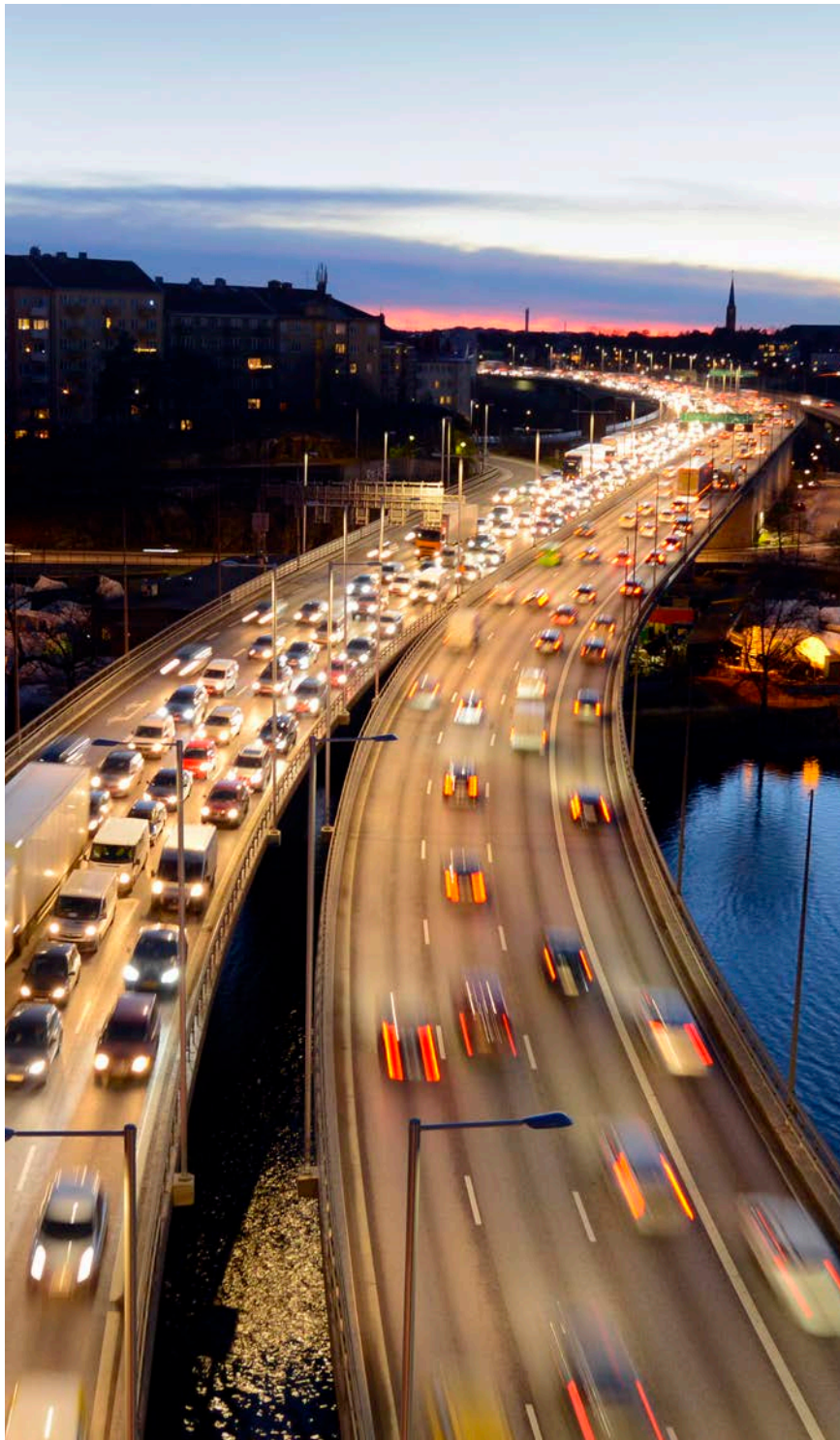
# Benefits | CLM's Roadmap To Value For Auto Manufacturers

Increasing margins and growing sales, reducing costs and delivering higher ROI, and increasing financial performance are the three main financial areas where CLM is making it's greatest revenue

and profit contributions today. The roadmap provides insights into results auto manufacturers are achieving today.







# Conclusion

The global auto industry is at an inflection point. Configurable new vehicles are proliferating, as are their myriad of options. And economies, including North America, are generating positive economic growth, giving car buyers confidence to make major purchases. Yet, car sales are flat lining and in some segments down.

Why? Because auto buyers aren't finding the models that they ideally want. And auto manufacturers are grappling with massive configuration gaps between their PLM, ERP, CRM and CAD systems, missing out on opportunities to sell more.

Configuration Lifecycle Management (CLM) is closing the configuration gaps and accelerating vehicle sales as a result.

It's time to compete using CLM as the foundation to win customers by offering what they want most – their dream car built exactly how they want it.

**Learn more at [configit.com](https://configit.com)**