
AWS
re:Invent
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AWS automotive sales incentive and pricing optimization

Haydn Peterswald (he/him)

WW Technical Leader DCE – AWS Auto
Amazon Web Services

Kevin Rothe (he/him)

Senior Consultant ProServe
Amazon Web Services

Michael Wallner (he/him)

Sr. Consultant Data and AI ProServe
Amazon Web Services

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What are we going to talk about today?

0 Digital customer engagement at Amazon Web Services

1 The business problem: Provide data-driven insight and confidence for incentive decisions

2 The technology: AI-powered microsegment elasticities engine on AWS

3 Business outcomes: Improvement of incentive spend and margin

4 Q&A

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Digital customer engagement

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Digital customer engagement

Empower top automotive brands to be relevant with every customer interaction for a lifetime of value

Experience

Build an end-to-end customer experience journey from mobile to the showroom/studio to develop new and relevant customer touchpoints for the brand

Data and Insights

Leverage customer insights to increase always-on brand interaction through personalized and engaging digital experiences

Decisions

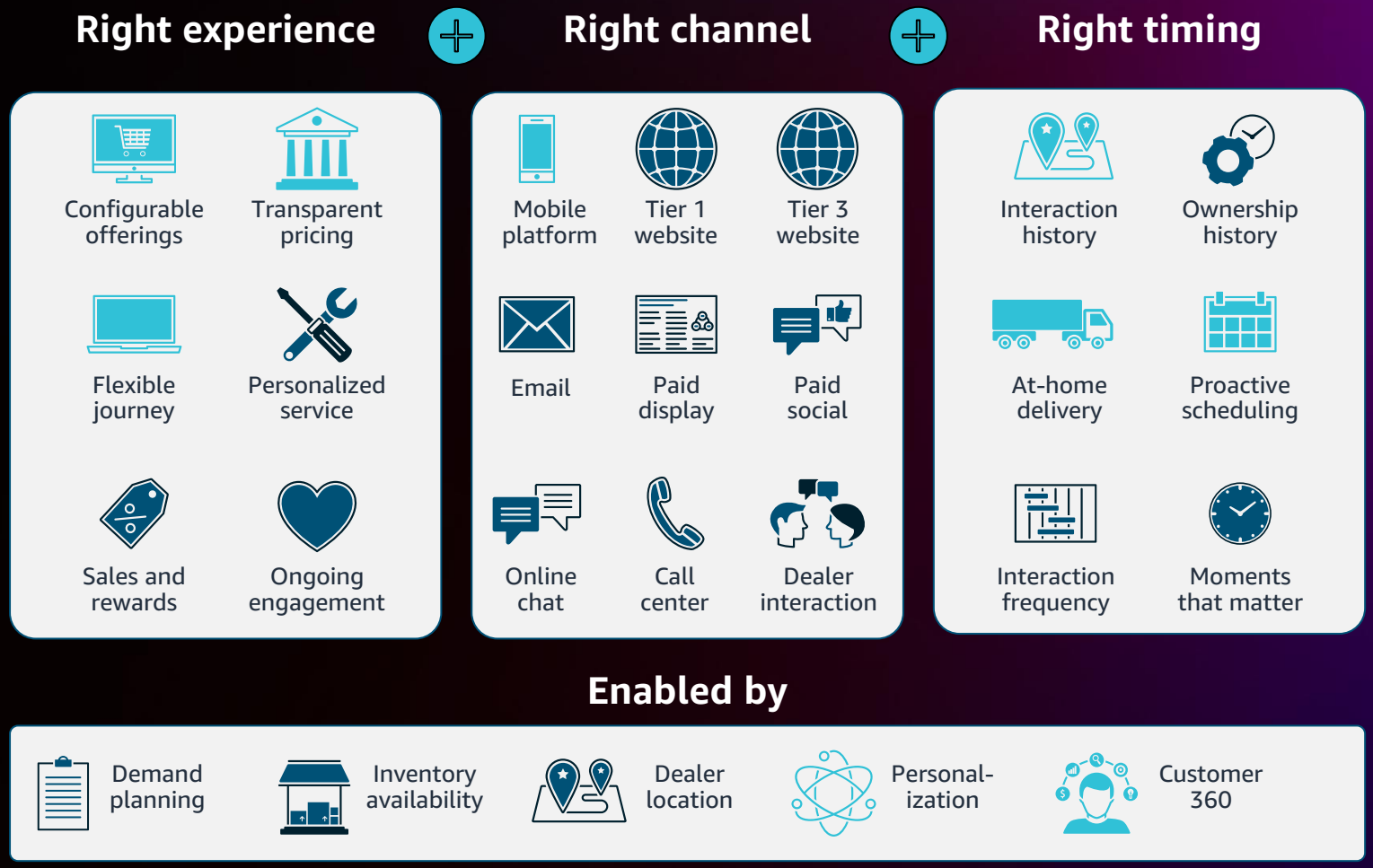
Manage data on a massive scale with low latency to better understand, engage, and acquire customers using ML and AI to scale

Transforming the digital customer experience to improve customer acquisition, retention, and loyalty

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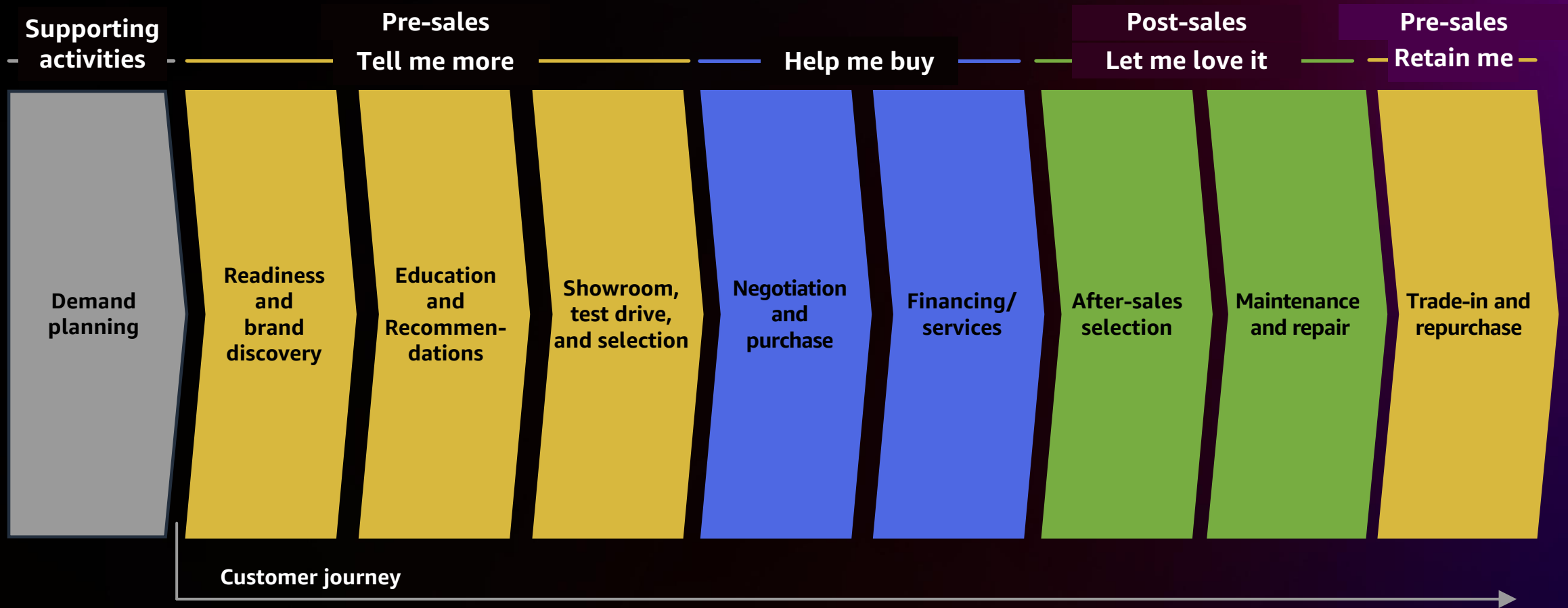
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A best-in-class customer journey delivers the **right experience** through the **right channel** at the **right time**



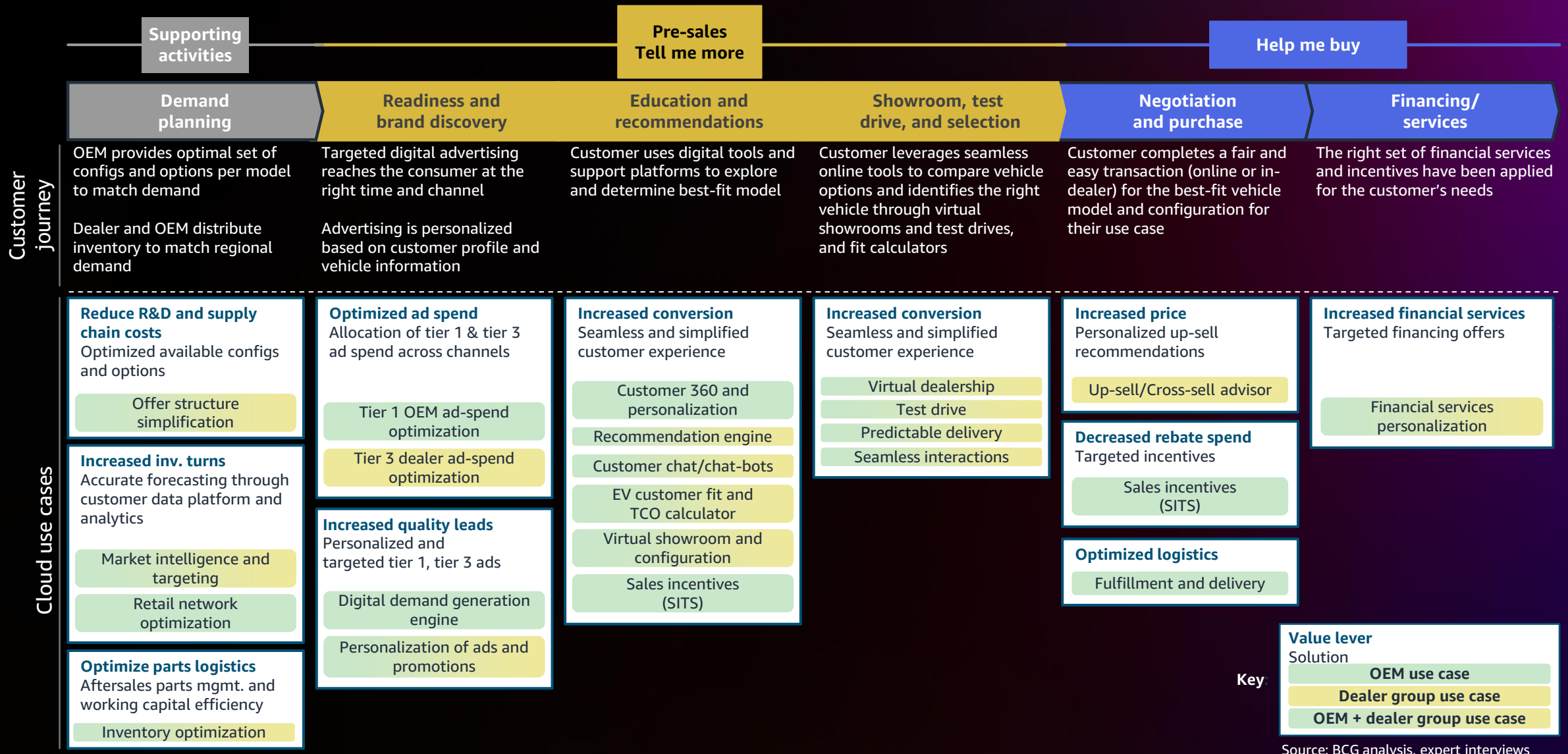
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AWS solutions help streamline end-to-end customer journey



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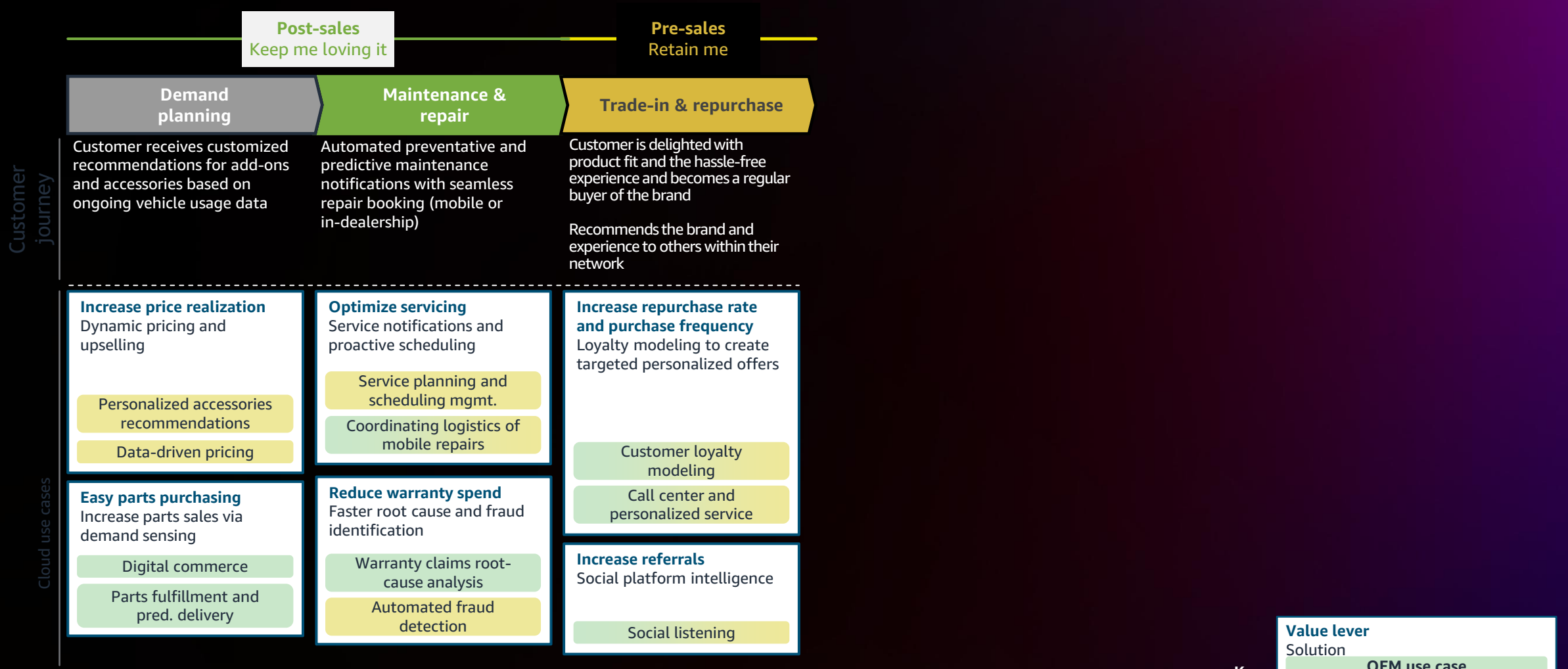
Digital use cases along the customer journey



Source: BCG analysis, expert interviews

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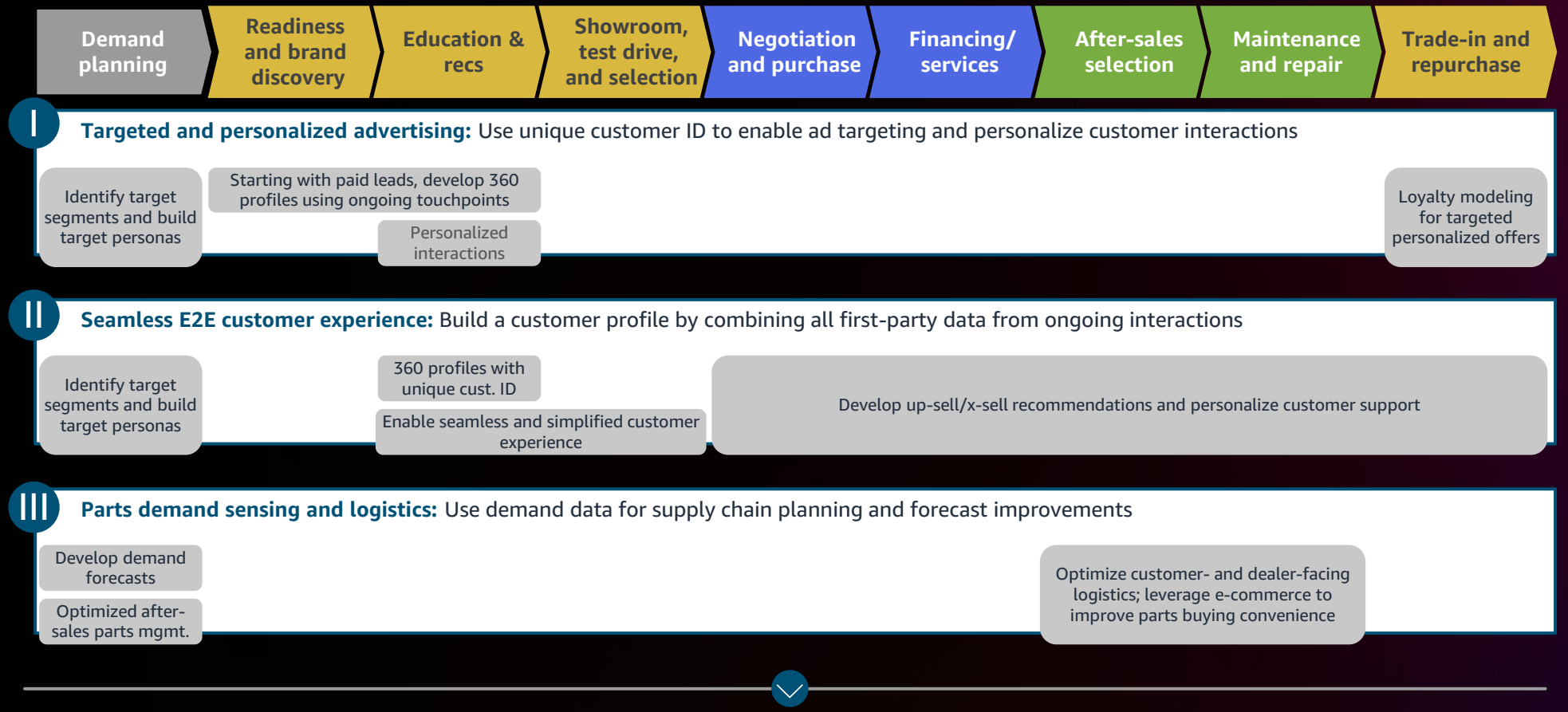
Digital use cases along the customer journey



Source: BCG analysis, expert interviews

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3 priority integrated solutions to unlock value & enable a customer journey transformation



Required infrastructure is foundational to a broader, cross-functional set of digital solutions

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Provide data-driven insight and confidence for incentive decisions

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Automotive incentive spend provide opportunities to improve profitability

Automotive industry incentive spend averages $3,900 per vehicle and $60B across 16 million vehicles (US)



Source: ALG (TrueCar), Motor Intelligence

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Lack of transparency of incentive spent

Current lack of transparency . . .



Limited transparency on actual incentive spent due to data silos



Limited steering optimizations due to data availability and analytics



Steering decisions based on heuristics and expert experience

. . . addressed by SiTS



Increased transparency on transactions through new granularity



Introduction of machine learning to create a prediction model



Visualization through a KPI-based dashboard

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Targeting sales measures will change in future

The industry does not want:

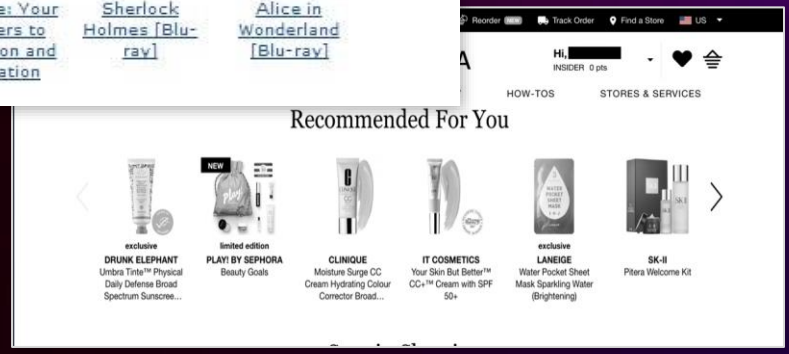




- Flat discounts across model lineup
- No segmentation
- No dynamic changes

Industry is looking for:



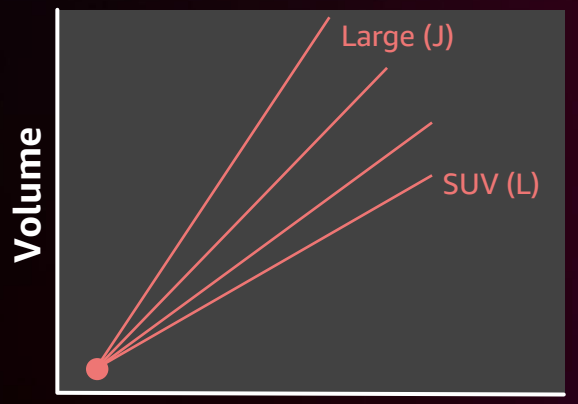


- Hundreds of customer segments
- Data-driven sales segmentation and elasticities

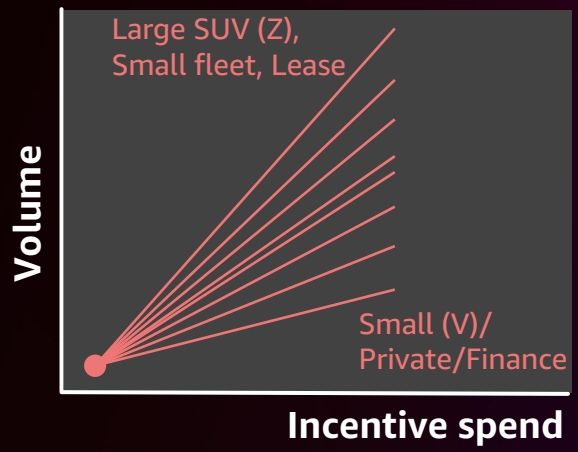
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Detailed elasticities enable improved decision-making

1. Where is it best to invest sales support?
2. Where is it best to divest sales support?
3. How much sales support to invest/divest?
4. Which types of sales support to push?



Without SiTS: Elasticity for <5 segments



With SiTS: analytics-based elasticity for hundreds of segments

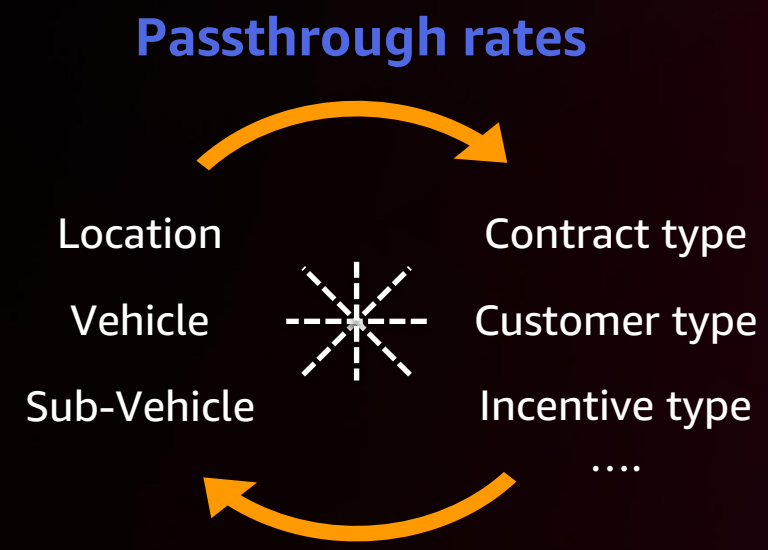
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Advanced analytics captures complex interactions between factors affecting sales

1 Consolidated data input

- January 2021 sales offer
- Vehicle J21
- Mid-size sports car offer
- 4-cylinder engine configs
- Increase cash for retail customers by $500

2 Machine learning model



3 Predictions output

Scenario A

Volume impact	Margin impact
+11%	-3%

Scenario B

Volume impact	Margin impact
+8%	+1%

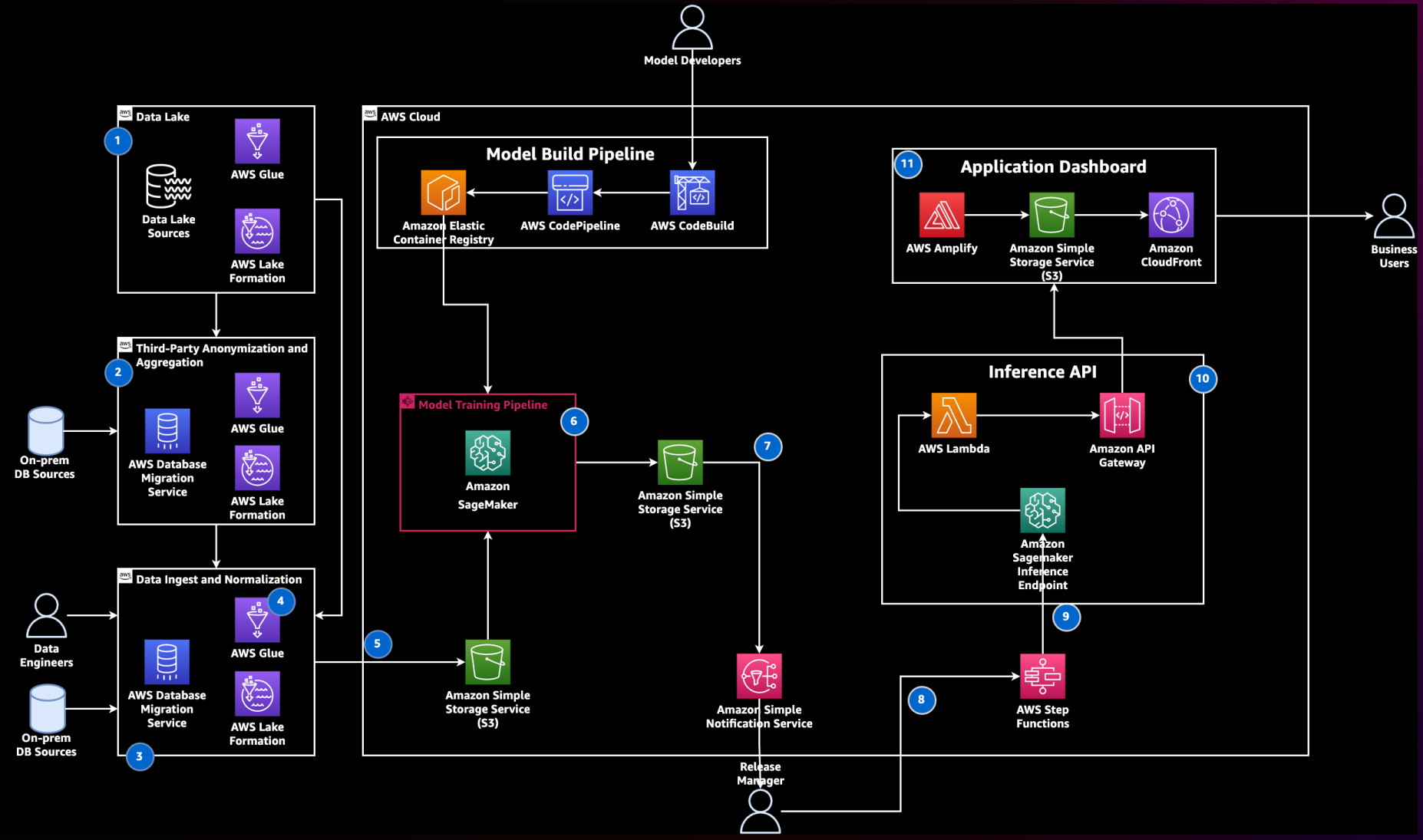
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AI-powered microsegment elasticities engine on AWS

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Automotive sales investment targeting solution

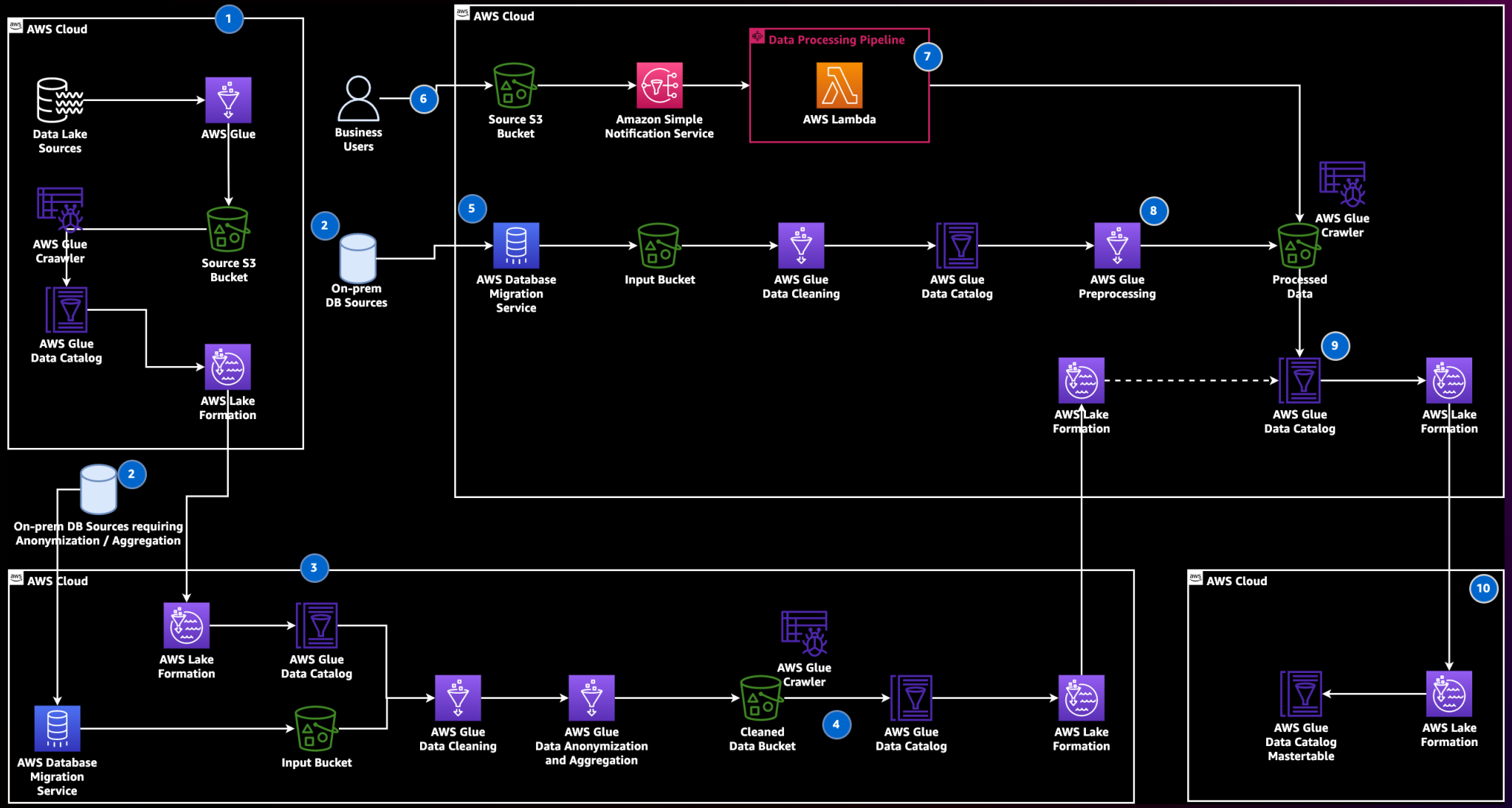
FINE-GRAINED ROI PREDICTION FOR AUTOMOTIVE SALES INCENTIVES



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Automotive sales investment targeting solution

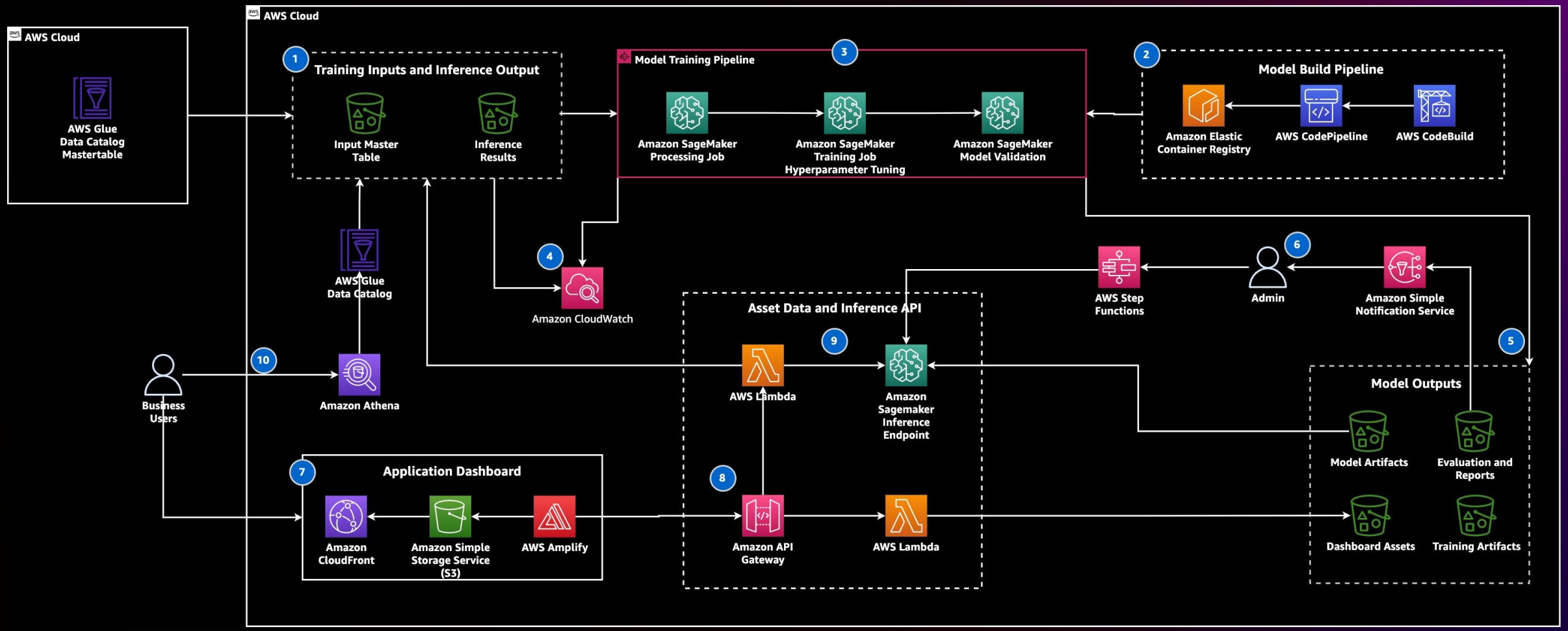
DATA INGEST ACCOUNT CONFIGURATION



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Automotive sales investment targeting solution

MACHINE LEARNING ARCHITECTURE – MODEL TRAINING, MODEL HOSTING AND FRONTEND



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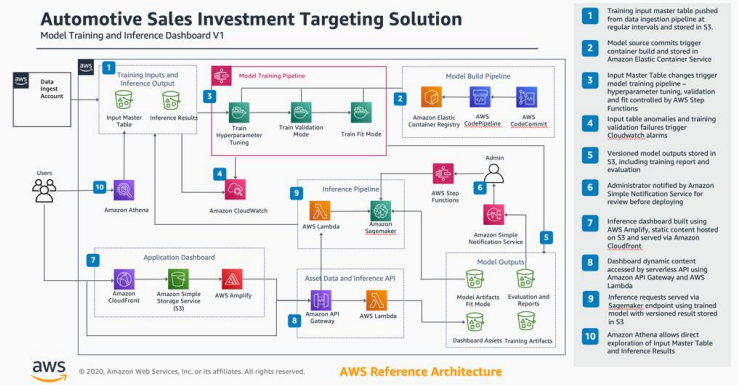
Business outcome of the solution

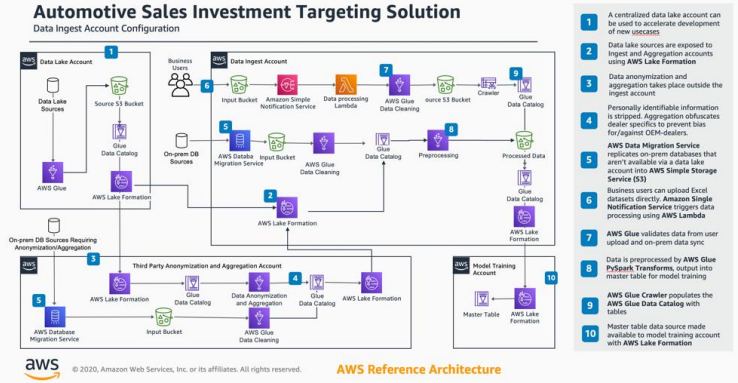
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Improvement of incentive spend and margin as main business outcomes

- Variable promotion part of solution is deployed in production in multiple countries
- Covers close to 90% of sales volume with high prediction accuracy
- Delivers results more quickly and more accurately than is possible with traditional manual analytics
- Exploration can be done immediately with sample data; full production in 2–3 quarters
- Target 2–4% improvement in incentive spend with .5% improvement in margin

Model training and dashboard





Data anonymization and ingest

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