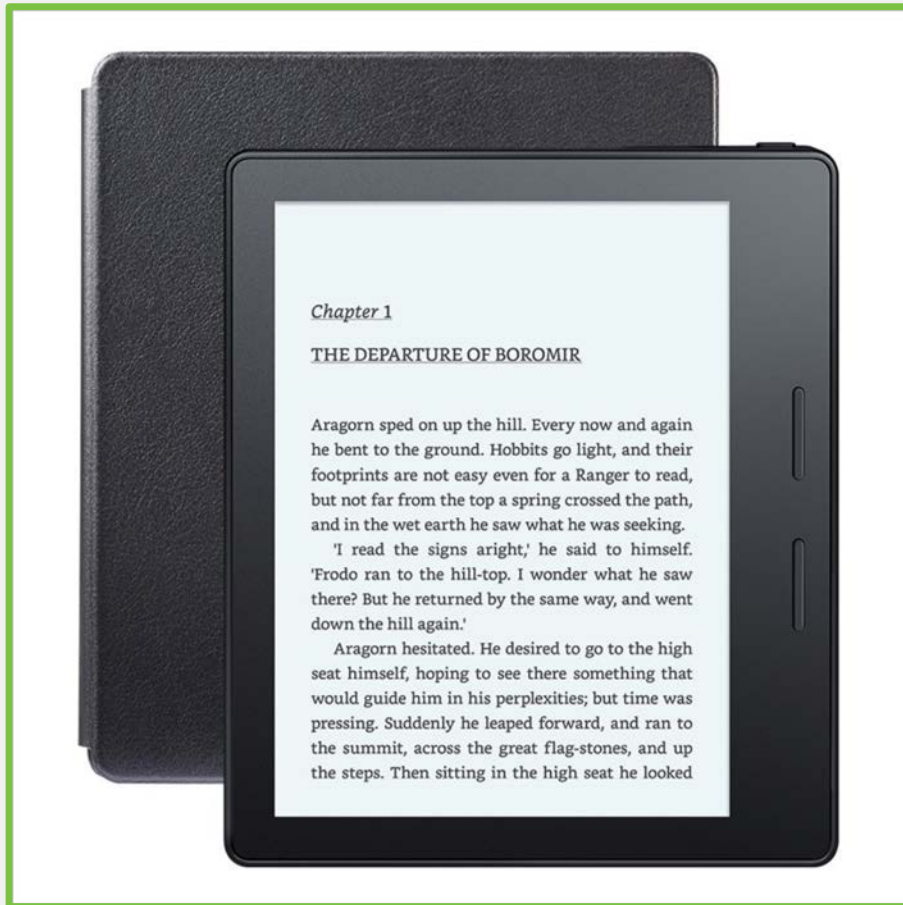


# Rate Deployment in a Digitally Transforming Insurance Environment

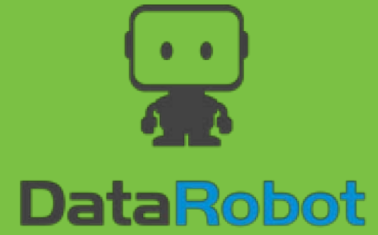
Neal Silbert, DataRobot

Dror Pockard, Earnix

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# Rate Deployment in a Digitally Transforming Insurance Environment

Neal Silbert, DataRobot

Dror Pockard, Earnix

# Agenda



1. Marketplace Challenges
2. Automating Real Time Rate Deployment
3. Integrating Machine Learning
4. Benefits and Results

# Marketplace Challenges



## Control and Governance



**Rate Change Process**

**Time to Market**

# Automating Rate Deployment



# Facilitating Real Time Rate Deployment

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What you can accomplish with quick deployment of rating structures and rates:

- ❑ More competitive and responsive to changing market dynamics.
- ❑ Deployment of rating structure and model changes goes from months to days.
- ❑ Speeds the wait for lengthy core system replacements – agile deployment can be realized now.
- ❑ Provides complete model management and optimization capabilities.
- ❑ Minimizes handoffs – rate development to deployment is more efficient and of higher quality – without numerous handoffs.





# End to End Pricing

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- ❑ Insurers need an end to end process for pricing and real time rate deployment.
- ❑ With the pricing function operationalized and thus integrated into the overall business process with other departments, price is treated holistically alongside marketing, sales, product management, risk, underwriting, claims, etc.
- ❑ Reliance on legacy rating engines and disparate analytical tools often creates unnecessary complexity and errors.
- ❑ Using one integrated platform for data management, modeling, simulation, optimization, testing, and deployment creates efficiency, improves the quality and facilitates collaboration across the organization.



# Governance – Critical for Insurance

## Governance:

- **Audit:** who did what when and why
- **Control:** who has authority to view, decide, execute
- **Share:** multiple users, multiple user types, multiple locations

- e.g.: How does your analytics process support model governance?
- e.g.: Consumer right to explanation requires transparency regarding decisions that involve models or rules in the system
- e.g.: Regulators require ability to prove that all risk related processes are codified and controlled
- e.g.: Insurers and lenders need to respond to regulator inquiries regarding customer complaints

# The ABCD's of end-to-end Pricing Platform

	Managerial Level	Transactional Level
Operational	<p><b>A. Centralized pricing management</b></p> <ul style="list-style-type: none"> <li>• Single pricing repository and single pricing process</li> <li>• Real-time Pricing Committee Support</li> <li>• Governance over pricing process</li> </ul>	<p><b>B. Real time pricing</b></p> <ul style="list-style-type: none"> <li>• Real-time delivery of prices</li> <li>• Full customer view</li> <li>• Quote repository</li> </ul>
Optimization / Personalization	<p><b>C. Predictive business decisioning</b></p> <ul style="list-style-type: none"> <li>• Financial planning (elasticity based volume/profit tradeoffs/New Products/What If)</li> <li>• Multi products planning</li> <li>• Monitoring</li> </ul>	<p><b>D. Personalization</b></p> <ul style="list-style-type: none"> <li>• Price optimization (rate sheet and/or individual)</li> <li>• Discounting approvals (semi-) automated</li> <li>• Individual product personalization</li> </ul>

# Product Bundle Personalization

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- ❑ Product Bundle Personalization extends the analytical modelling beyond just modeling for pricing, retention, claims, etc.
- ❑ It generates, for each customer, a personalized product or bundle that fits them best.



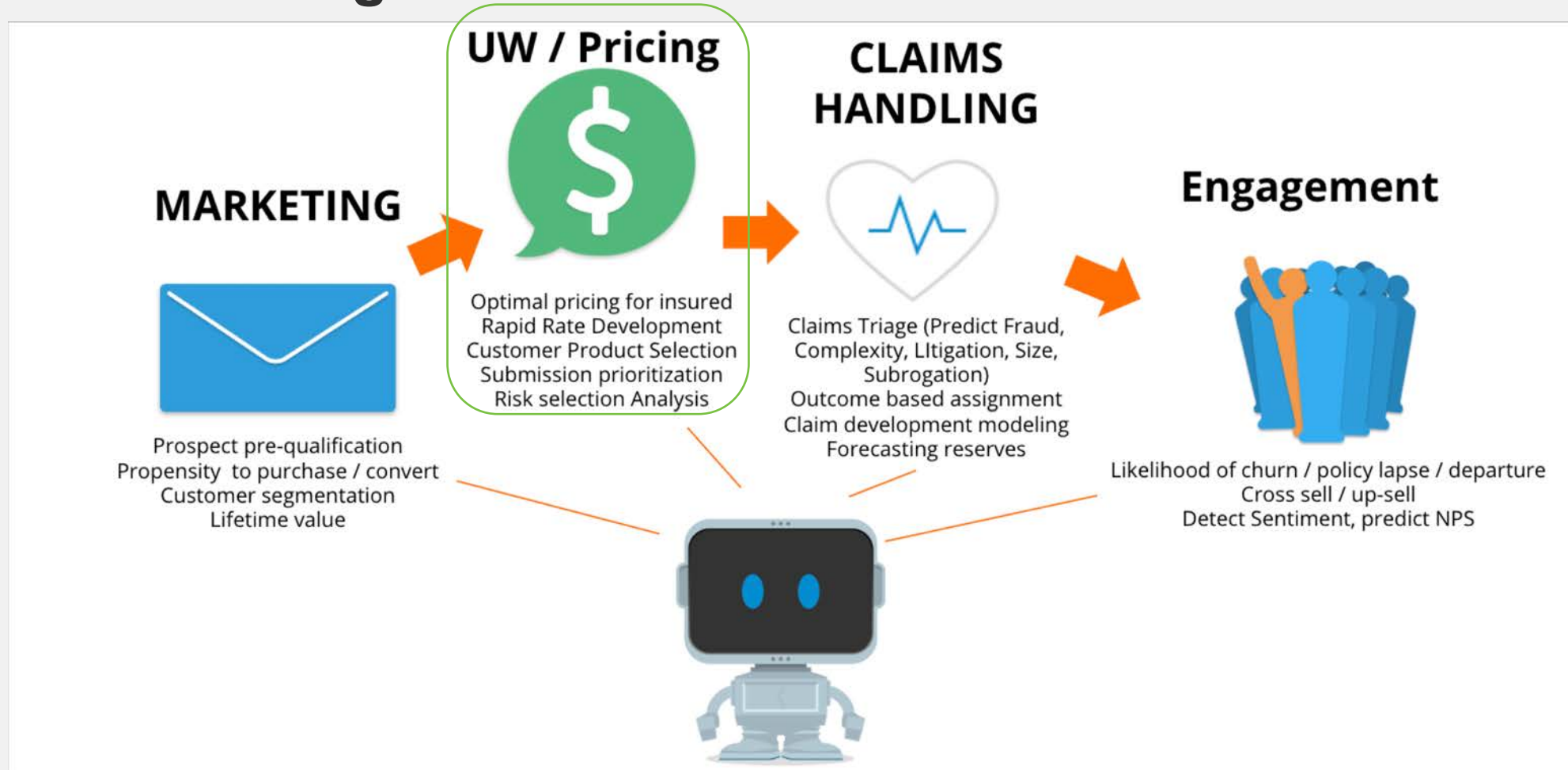
# Event Detection

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- ❑ Analytics-based customer monitoring, event detection and triggering enables financial institutions to proactively market contextualized offers- through the capability to sense, think, and then act on data.
- ❑ Personalized customer offers can be precisely timed during “moments that matter”. Relying on analytically based pattern detection and decisioning allows offers to be more timely and contextually relevant.



# DataRobot's Auto Machine Learning Opens Numerous Pricing and Underwriting Possibilities with Earnix



# Example Applications of DataRobot Auto Machine Learning Include...

## Sales and Marketing

- Lead scoring / propensity
- Cross-sell / Up-sell
- Risk pre-qualification
- Campaign optimization
- Lifetime customer value
- Revenue forecasting
- Agency optimization

## Underwriting

- Customer preference
- Submission triage
- Underwriting fast track
- Auto accept / reject w/ reason codes
- Assignment optimization
- Risk selection / quality score
- Prioritized questions
- Risks like this comparison

## Pricing (Actuarial)

- Technical pricing
- Dynamic pricing
- Price elasticity analysis
- Competitor prices / market ranking
- Decile / Quintile typical customer

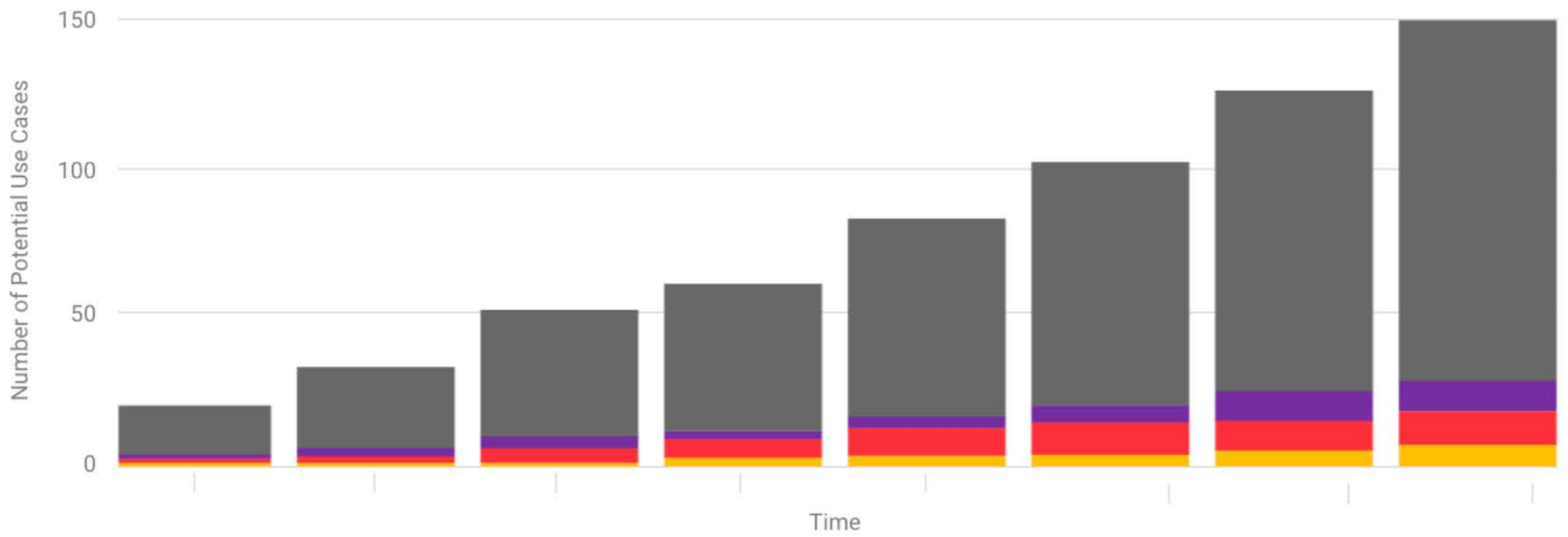


# HAND-CODING EVERY MODEL CANNOT POSSIBLY MEET THE DEMAND



In order to recognize the potential of AI, organizations need to utilize tools that will accelerate adoption

- MISSED OPPORTUNITIES**
- HAND-CODING:** time consuming with high skill requirement
- CONSULTANTS:** expensive, hard to maintain independently
- VENDOR MODELS:** narrow solutions, often inflexible and black box







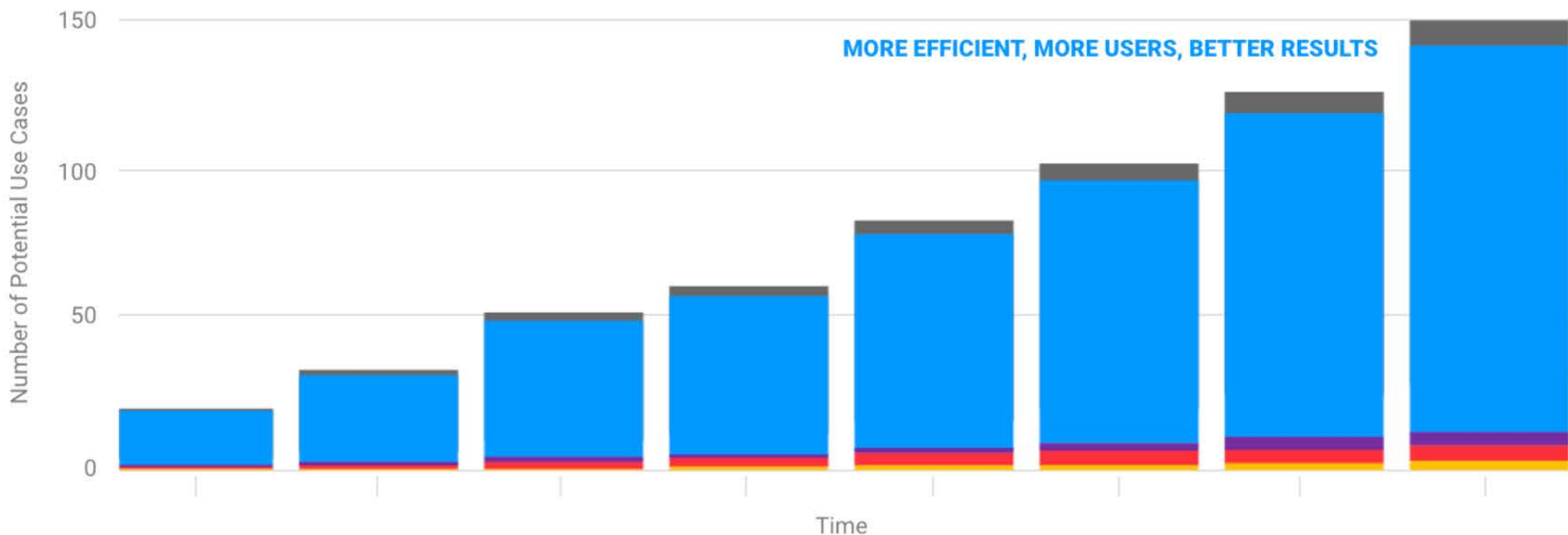
# AUTOMATED MACHINE LEARNING GREATLY INCREASES CAPACITY



## DataRobot's automated machine learning:

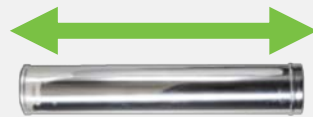
1. Enables your data science teams to be more productive
2. Increases the number of people who can build AI solutions

-  **AUTOMATED MACHINE LEARNING FOR EVERYTHING ELSE**
-  **UTILIZE HAND CODING FOR THE MOST COMPLEX PROBLEMS**



## All Interaction Parameters

- Customer ID Data
- Product Data
- Pricing Data
- Analytical Model Scores
- Segmentation Criteria
- Other Selection Criteria as Needed



“A Single Pipe”

## Real Time Engine

- Optimal Rates
- Optimal Discounts
- Optimal Add-ons
- Accuracy Prices
- Probability/Priority Indicators
- Timing
- Channel Preference
- Model Management
- Control and Governance
- Other Real Time Metrics as Needed

EARNIX



“A Single Pipe”

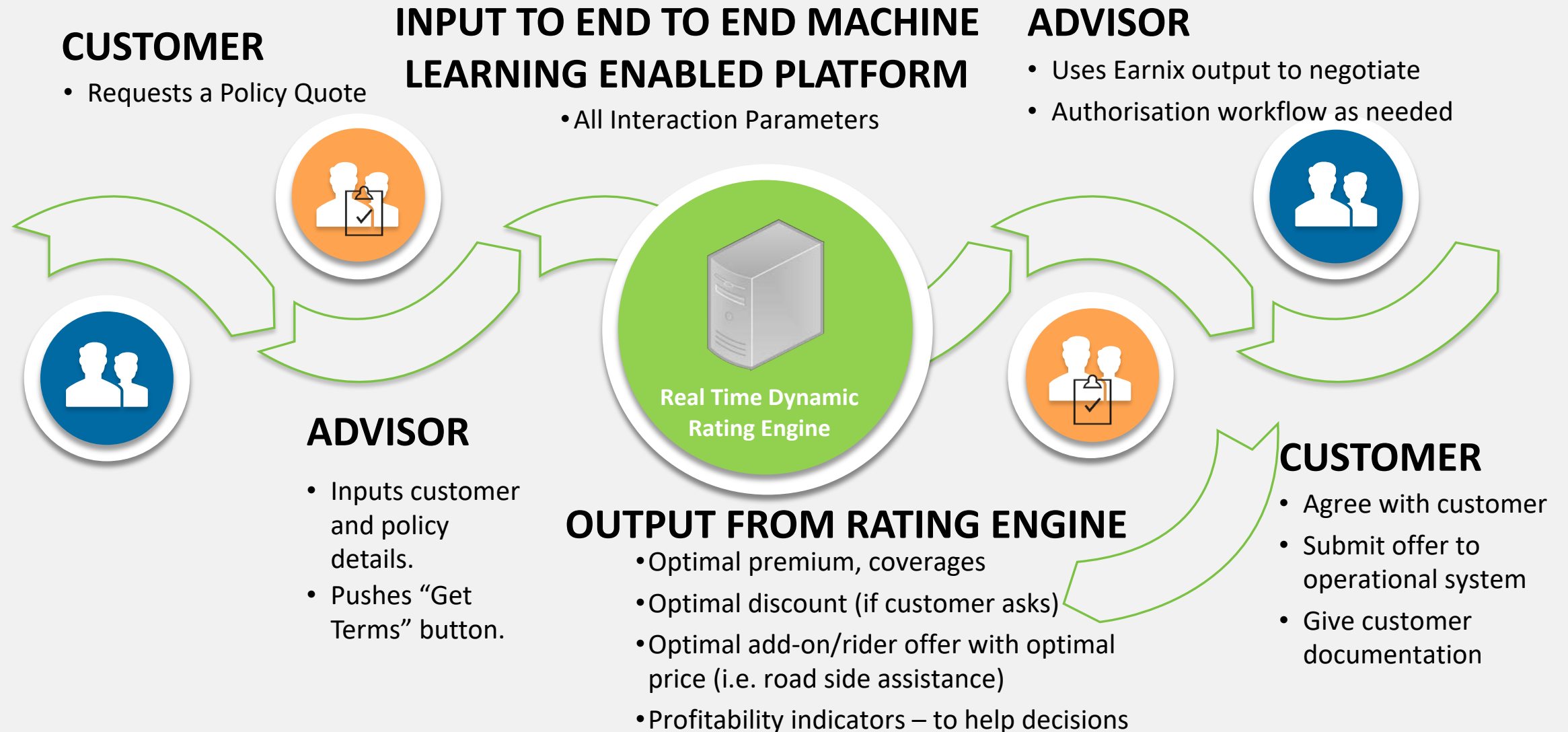
## Result

- Correct Rates, Discounts, Product, Price, and Timing Delivered to Appropriate Channel
- Hyper Personalization of Offers
- Performance Monitoring

Marketing Channel of Choice



# How Real Time Rate Deployment Works





## Earnix Real Time Rate Deployment Features

- ❑ **Proven Reliable** - Installed at many large insurance companies around the world.
- ❑ **Flexible** - can be integrated with any front-end system or existing rating engine you currently use.
- ❑ **Comprehensive** – includes data management, modeling, simulation, testing, deployment, and monitoring
- ❑ **Easy Integration** - cloud-based and easily connected to core or channel systems through APIs or web services
- ❑ **Secure and Stable** - Highly scalable system that provides the needed performance that a mission critical system should provide.
- ❑ **Control and Governance** – User and group permissions, logs, and audit trails to provide process control and administration.

# Thank You

EARNIX

