



# Leveraging Behavioural and Contextual Signals from Digital Distribution and Underwriting to Improve the Life Insurance Value Chain

EAA e-Conference on  
Data Science & Data Ethics

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*Reinsurance Group of America*

## *Leveraging behavioural and contextual signals from digital distribution and underwriting to improve the life insurance value chain*

1. Customer tracking and analytics: description and objectives
2. Examples of behavioural and contextual signals
3. Key challenges of customer tracking and analytics
4. Case studies from across the life insurance value chain
5. Recommendations and Q&A



Data and  
numbers geek



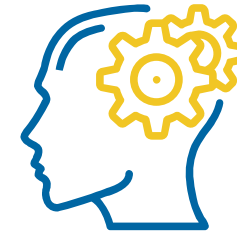
Built and led  
world-class teams



Worked across  
five continents



Helped companies of  
all shapes and sizes



Thought leader

# Digital Distribution & UW Definitions

Term	Definition
<b>Digital Distribution</b>	Marketing and selling life insurance through digital channels
<b>Digital Underwriting</b>	End-to-end process to produce instant underwriting decision
<b>Customer Tracking</b>	Tools and techniques to collect digital customer data
<b>Behavioural Signal</b>	Characteristics describing customer behaviour
<b>Contextual Signal</b>	Characteristics providing context about customer behaviour

## *Going beyond traditional underwriting questions and answers*

Category	Examples
<b>Traffic Source</b>	Search terms, referrer, medium, campaign (UTM tags)
<b>Location and Time</b>	City, region, country, date, time
<b>Device</b>	Type, screen resolution, operating system, browser, language
<b>Clicks</b>	Links, buttons, elements, answers, videos
<b>Views</b>	Pages, sections, questions, videos
<b>Forms</b>	Values, text, choices, edits
<b>Elapsed Time</b>	Pages, sections, questions, videos
<b>Other</b>	Keystrokes cadence, typing speed, mouse speed, copies and pastes

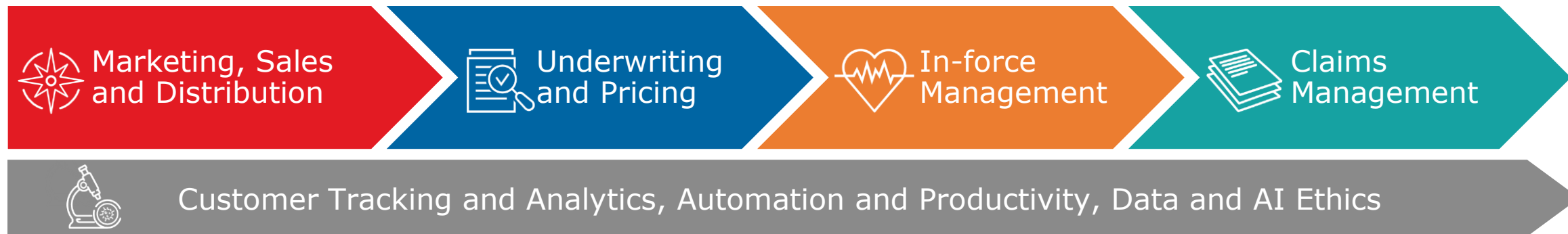
# Customer Tracking & Analytics Challenges

*Using behavioural and contextual signals is far from easy*

1. Installing customer tracking tool like Google Analytics is not enough
2. Data connectivity is crucial to unlocking value
  - Behavioural and contextual signals are often siloed from downstream data
3. Need end-to-end tracking strategy and plan
4. Need right skills and capabilities
  - Web development, data engineering/analytics/science, behavioural science, SEO
5. Ever-evolving data privacy laws and AI regulation

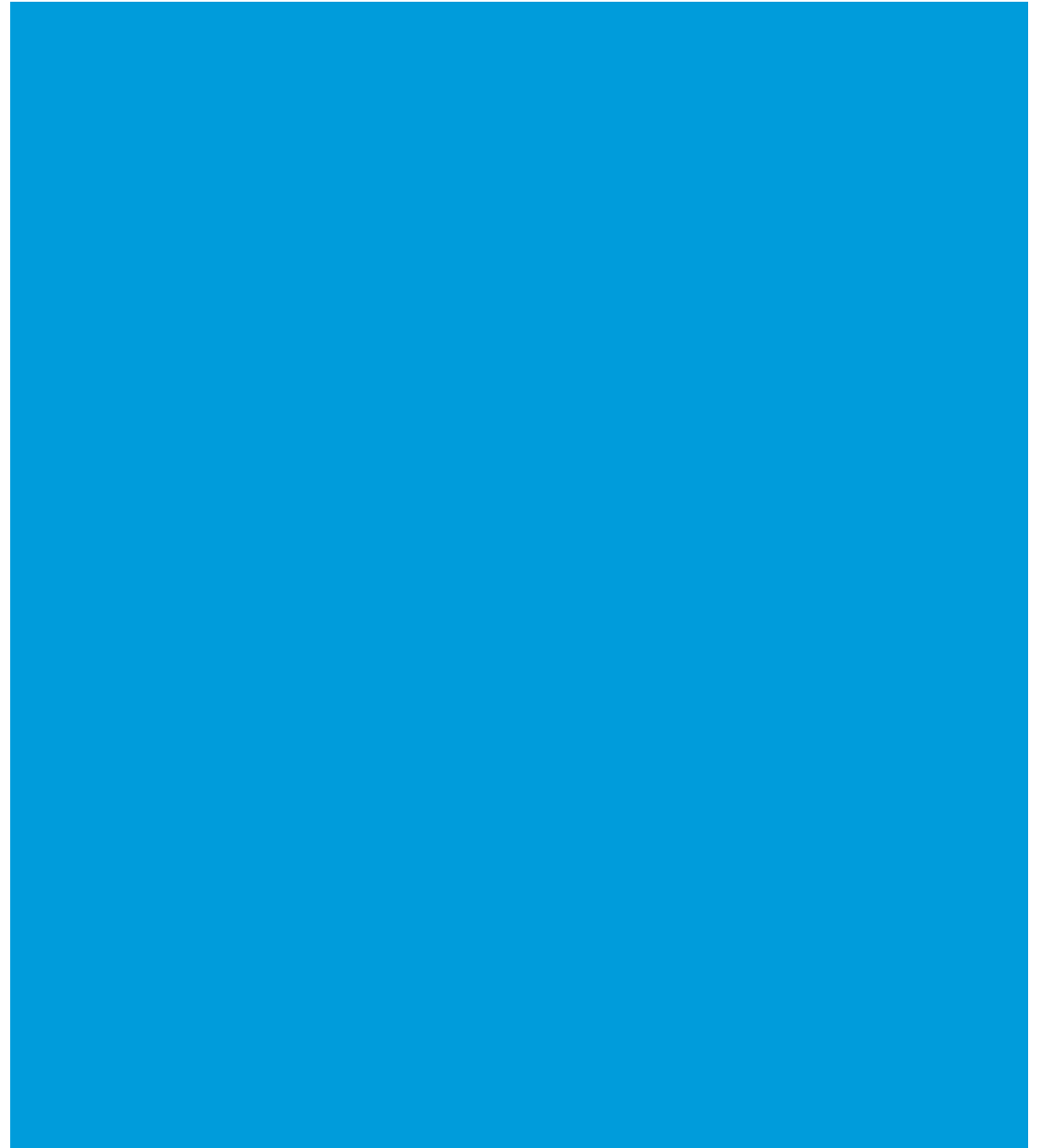
# End-to-End Customer Tracking & Analytics

*Unlocking value of behavioural and contextual signals  
across the Life Insurance value chain*



At RGA, we have developed capabilities and solutions to responsibly track and analyse customer behaviour across the value chain – “from life insurance search to claim”

# CASE STUDIES



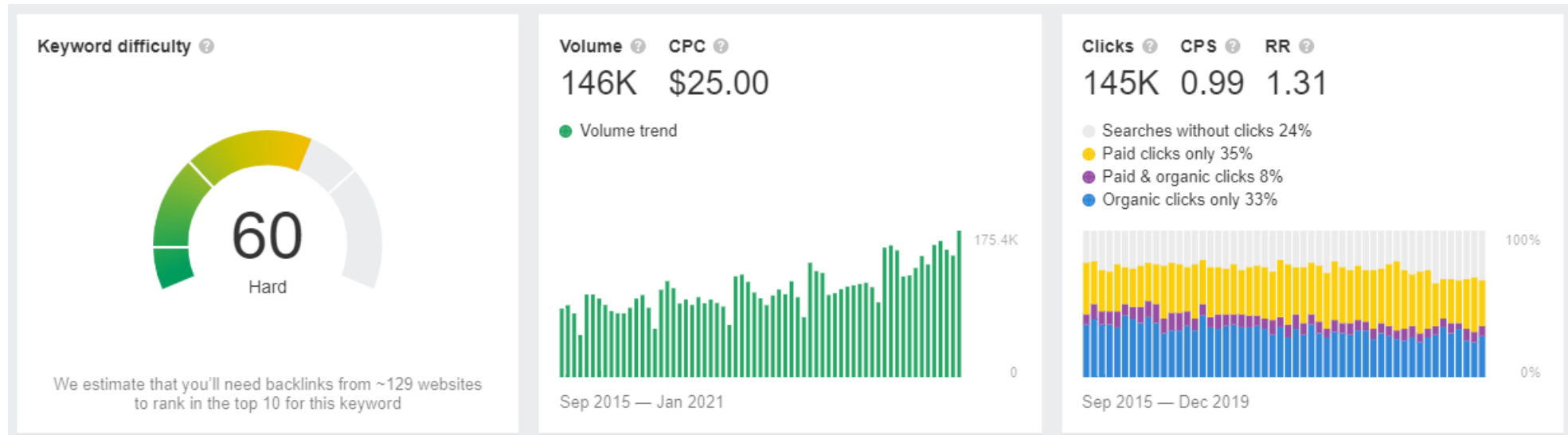


# SEO Keywords Research & Analysis (1/2)

*Every 4 seconds, someone in the UK searches for life insurance on Google*

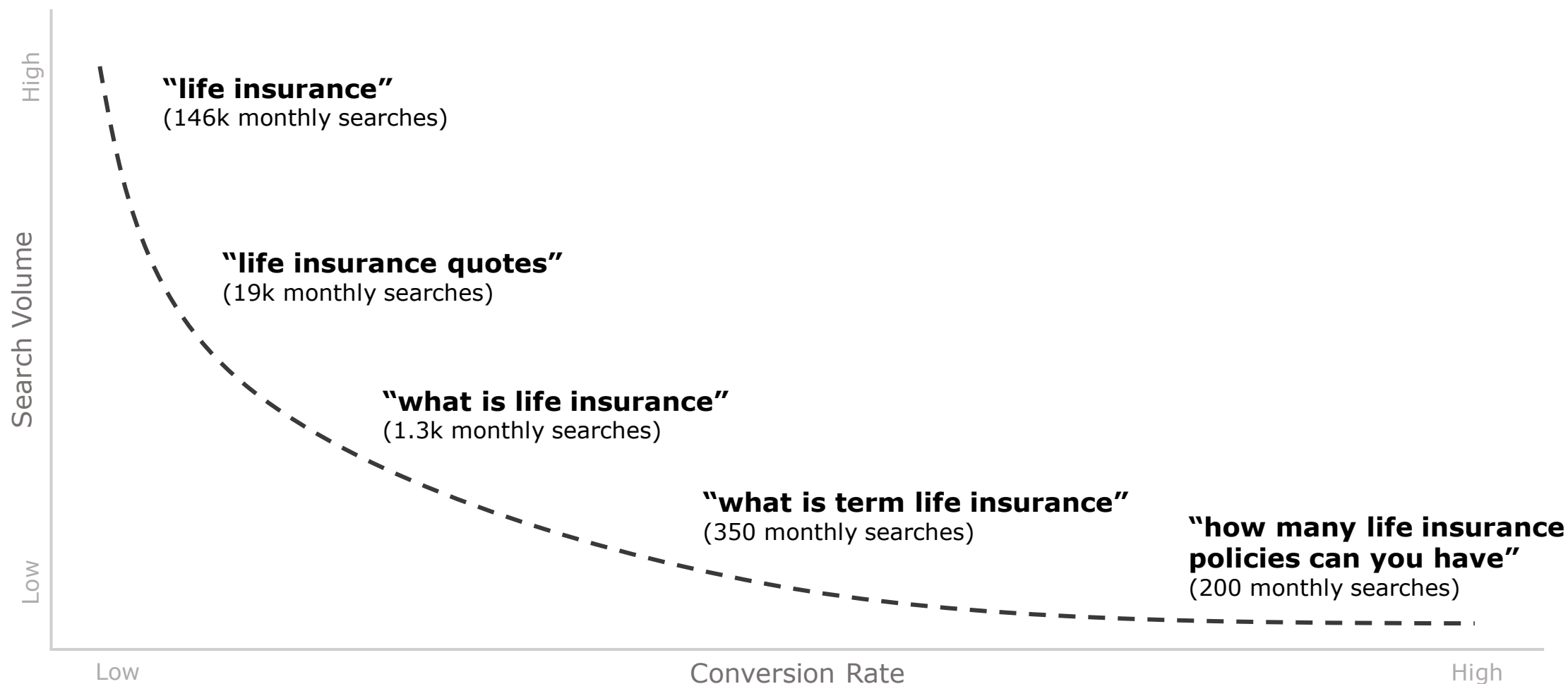
- 679k searches / month with increasing trend
- 27k unique keywords and 1.7k unique questions
  - Only 14% of keywords are contested by at least one of 70+ distributors

## “life insurance” keyword

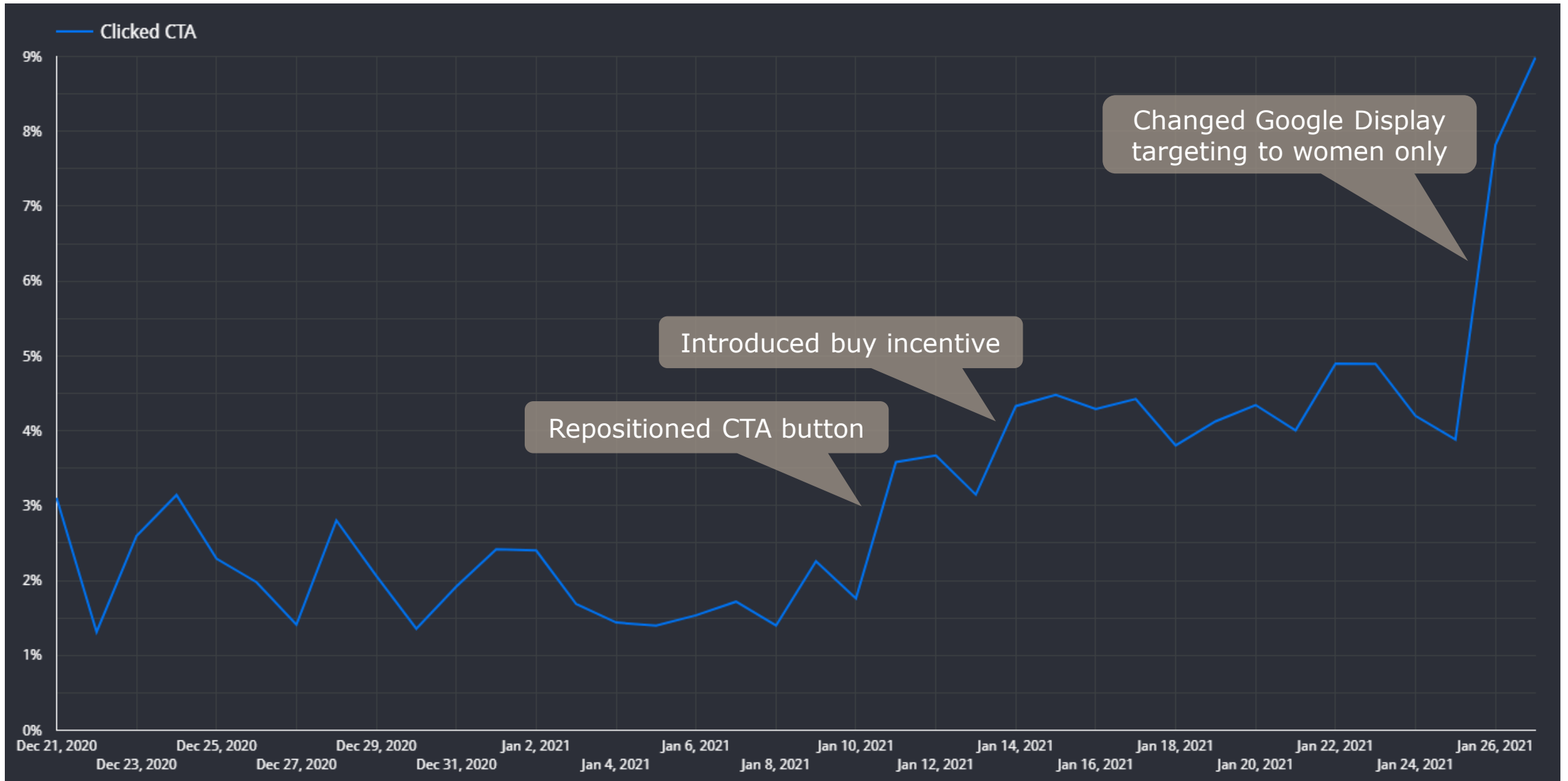


# SEO Keywords Research & Analysis (2/2)

*Finding long-tail, low difficulty, and uncontested keywords*



# Call-to-Action Conversion Optimisation



## *Removing friction by reducing choice and cognitive load*

### Payout Option

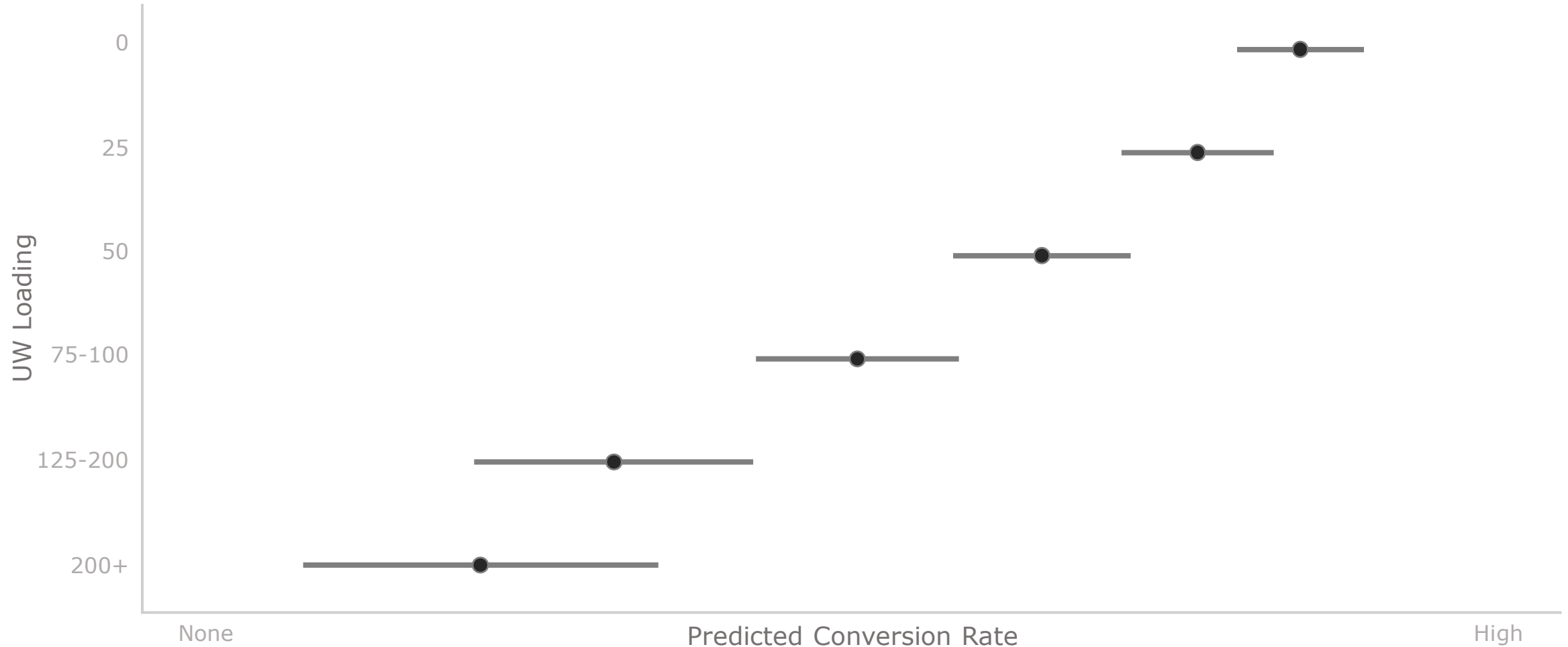
- 80% of customers explored payout options (lump sum vs. monthly income)
- 79% of those customers selected lump sum payout option
- Customers spent 1-2 minutes making a decision
  - By far the most time-consuming step in the customer journey

### Sum Insured Amount

- ~55-75% of customers abandon journey when having to choose cover level
- UI/UX and behavioural science opportunities to help customers to:
  - Decide on the appropriate sum insured
  - Reduce cognitive load and fatigue
  - Instil certainty, confidence, and positivity

# Declines & Conversions Optimisation

*Applicants with loading have much lower chances to convert*



## *Acquisition channel and perceived affordability influences early lapses*

- ~2x higher early lapse rate for social media over high-intent channels
  - Persuasion and context is key in digital, D2C channels
- Customer's income and perceived lack of affordability affect lapses
  - As income decreases, the risk of early lapse increases
  - Life insurance seems as "all pain, no gain" and easy to quit
- Special offers can be effective retention mechanisms
  - Reframing the "pain of paying" for life insurance

At RGA, we are combining Data and Analytics with Behavioural Science to design effective communications and tools to improve conversions and reduce lapses.

# Suspicious Behaviour Detection (1/2)

*Signals from digital, D2C journeys can be proxies to underlying behaviour*

- Number of seconds to answer each UW question
- Number of clicks / edits for each UW question
- Multiple UW sessions and outcomes by applicant



# ***Suspicious Behaviour Detection (2/2)***

*Signals from digital, D2C journeys can be proxies to underlying behaviour*

- However, underlying behaviour and context is much more complex
  - Difficult if not impossible to generalise
  - Risk of age / capability / technology discrimination
  - Need for ongoing monitoring and human intervention

Identifying suspicious behaviour, non-disclosures, and fraud is possible, albeit difficult to generalise. Caution should be given to bias, fairness, and discrimination.



- Behavioural and contextual signals from digital distribution and underwriting present both **opportunities** and **challenges**
- Difficult to harness, but valuable for **understanding behaviour**
- Useful for tackling challenges across life insurance value chain
- Susceptible to unfairness and discrimination if not used correctly
- Focus on **“augmented intelligence”** rather than “artificial intelligence”
  - More use of data and insights gathered to identify and respond to customer needs and experience
  - Less focus on automated decision-making for underwriting, pricing, fraud
  - Humans should be involved, engaged, and accountable for decision-making

As Vice President, Decision Science & AI, Petr Vaclav leads data analytics, machine learning (ML), and artificial intelligence (AI) initiatives for RGA and RGAX business units, clients, ventures and acquisitions across the EMEA region. Petr's main focus is on digital distribution and underwriting, data-driven and predictive underwriting, and bancassurance as well as being a bridge between the company, its clients and partners.

Petr has played a major role in RGA's initiatives aimed to reimagine how life insurance is sold online and directly to customers. Petr has led all activities related to tracking, understanding and predicting customer behaviour, running A|B experiments, and optimising customer journeys. These activities have resulted in sustained and responsible improvements across the life insurance value chain, driving value for RGA and its clients.

Prior to joining RGA in 2020, Petr had more than 10 years of experience as data science, business and technology leader helping companies harness the power of data, build world-class data teams, and develop commercially successful ML and AI solutions across financial services, fintech, insurtech, e-commerce, pharma, and professional services.

Petr received a Master of Science (M.Sc.) in Business Analytics from the University of Warwick, and a Bachelor of Arts (B.A.) in Business and Management from the University of Reading.

## ABOUT ME



Petr  
Vaclav

RGA



# Thank you very much for your attention

## Contact

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