

## Draft Pending Adoption

Draft: 4/18/22

Big Data and Artificial Intelligence (H) Working Group  
Kansas City, MO  
April 5, 2022

The Big Data and Artificial Intelligence (H) Working Group of the Innovation, Cybersecurity, and Technology (H) Committee met in Kansas City, MO, April 5, 2022. The following Working Group members participated: Elizabeth Keller Dwyer, Chair (RI); Amy L. Beard, Co-Vice Chair (IN); Doug Ommen, Co-Vice Chair (IA); Adrienne A. Harris, Co-Vice Chair, represented by My Chi To and Kaitlin Asrow (NY); Kevin Gaffney, Co-Vice Chair (VT); Lori K. Wing-Heier (AK); Ken Allen (CA); Peg Brown (CO); Andrew N. Mais (CT); Frank Pyle (DE); Nicole Altieri Crockett (FL); Erica Weyhenmeyer (IL); Kathleen A. Birrane (MD); Timothy N. Schott and Benjamin Yardley (ME); Karen Dennis (MI); Cynthia Amann (MO); Kathy Shortt (NC); Chris Aufenthie (ND); Christian Citarella (NH); Barbara D. Richardson (NV); Judith L. French (OH); Glen Mulready and Teresa Green (OK); Doug Hartz (OR); Michael Humphreys (PA); Raymond G. Farmer and Michael Wise (SC); Frank Marnell (SD); Bill Huddleston (TN); Mark Worman (TX); Eric Lowe (VA); Molly Nollette and John Haworth (WA); Nathan Houdek and Jennifer Stegall (WI); and Juanita Wimmer (WV).

### 1. Discussed its Work Plan

Superintendent Dwyer said the 2022 work plan builds on the Working Group's discussions last year and the three themes of: 1) artificial intelligence (AI)/machine learning (ML) surveys; 2) tools for monitoring AI/ML; and 3) AI/ML regulatory frameworks and governance. She said third-party data and model vendors, while included in the survey work last year, will be a new workstream in 2022. Superintendent Dwyer said the workstreams tie back to the Working Group's charges. The first charge is to research the use of big data and AI/ML in the business of insurance, and evaluate existing regulatory frameworks for overseeing and monitoring their use. This charge includes the potential recommendation for the development of model governance for the use of big data and AI/ML. Superintendent Dwyer said the second charge is to review current audit and certification programs and/or frameworks, and assess data and regulatory tools needed for state insurance regulators to appropriately monitor the marketplace that could be used to oversee insurers' use of consumer and non-insurance data and models using intelligent algorithms. She said the third charge focuses on the assessment of data and regulatory tools needed, which will include, as appropriate, recommendations for the collection of additional data and the development of additional tools.

Superintendent Dwyer said the work plan provides a summary of these charges and the following four workstreams: 1) survey work; 2) third-party data and model vendors; 3) evaluation of tools and resources for monitoring industry's use of data; and 4) regulatory framework and governance. She said the first workstream will continue the analysis of the AI/ML private personal auto (PPA) survey data, use the PPA survey data and experience to inform the development of an AI/ML homeowners (HO) survey, and develop an AI/ML life insurance survey. The second workstream will determine the appropriate regulatory evaluation of third-party data and model vendors and produce a recommended regulatory framework for monitoring and overseeing industry's use of third-party data and model vendors. The third workstream will gather data and evaluate information on governance models and software tools, which could assist state insurance regulators in overseeing and monitoring industry's use of data and AI/ML and eliminate any bias in such use. The fourth workstream will evaluate how best to implement the expectations outlined in the NAIC AI Principles and provide suggestions on next steps, which could include regulatory guidance such as model governance.

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### 2. Discussed 2022 Workstreams

Mr. Gaffney said Workstream One will build on the survey work completed in 2021 and will continue the analysis of the PPA survey data. As noted by Superintendent Dwyer, Mr. Gaffney said the subject matter experts (SMEs) will use the lessons learned from the PPA survey to develop the HO survey and life insurance survey. Mr. Gaffney said he anticipates the HO survey will be issued in June, and the life insurance survey will be issued in August, with company responses being collected on a confidential basis. Finally, Mr. Gaffney said the HO survey will be similar to the PPA survey, but the life insurance survey will be developed by a different group of regulatory SME. Mr. Gaffney said the survey results and white paper to be completed by the Fall National Meeting will support the other workstreams, especially Workstream Two and Workstream Four.

Commissioner Ommen said Workstream Two is focusing on third-party data and model vendors. As noted in the work plan, a group of state insurance regulator SMEs will evaluate the activities of third-party data and model vendors and produce a recommended regulatory framework for monitoring and overseeing industry's use of these vendors. Commissioner Ommen said the findings and insights will be reported to the Working Group for public discussion and recommendation to the Innovation, Cybersecurity, and Technology (H) Committee. As these efforts proceed, future work will likely be referred to other NAIC committees, task forces, and working groups. To provide a little more context to these efforts, Commissioner Ommen said the first area of focus is to identify new entities operating in the marketplace, better understand their operating practices, and identify whether and how states are currently licensing these entities. While this work will be broader than rating, he said the Casualty Actuarial and Statistical (C) Task Force's recent survey identifying the types of licenses states issue may help inform these initial discussions. These licenses include Advisory Organizations, Rating Organizations, Rate Service Organizations, Statistical Agent, Statistical Organizations, and Insurance Service Organizations. He said Workstream Two will address all vendors that provide nontraditional data and models to insurers, such as vendors providing data for marketing, fraud detection, and claims settlement. Commissioner Ommen said this is one of the reasons why future work will likely be referred to other NAIC committees, task forces, and working groups. He said the second area of focus is to develop examination standards or questions that states can use for engaging with third-party data vendors and insurers regarding their use of third-party data vendors. Because this work is broader than advisory organizations and rating issues, Commissioner Ommen said the current examination standards for advisory organizations do not provide the right focus but that these standards will be kept in mind as examination standards are developed for third-party data and model vendors.

Superintendent Dwyer said Superintendent Harris is leading Workstream Three with Ms. To and Ms. Asrow. Ms. Asrow said this Workstream will review existing trends, tools, and approaches that can be deployed, or are being deployed, by supervisors to monitor the use of AI/ML by insurance companies. Ms. Asrow said these tools are referenced as SupTech and will include discussion of statistical methods that allow state insurance regulators to better identify disparate impact or unfair discrimination. This Workstream will also discuss tools and vendors the insurance industry is using directly to detect discrimination or bias that might result from the use of data or new processes. Ms. Asrow said the goal is to produce a summary of the supervisory approaches and processes that state insurance regulators can use. This summary will also identify best practices in the regulation of AI/ML, such as relevant model governance frameworks that have been used by state insurance regulators for insurance, banking, or other financial services. Ms. Asrow said one potential option is focus on the mitigation practices of insurance companies rather than directly reviewing for bias using technical tools. Ms. Asrow said this Workstream will primarily coordinate with Workstreams Two and Workstream Four.

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Commissioner Beard said Workstream Four will focus on how to implement the expectations outlined in the NAIC's AI Principles and provide suggestions on the appropriate regulatory framework for monitoring AI/ML, which could include model governance. She said this Workstream will be dependent upon the efforts of the other three workstreams.

Birny Birnbaum (Center for Economic Justice—CEJ) said the work plan is comprehensive and requested the Working Group review potential antitrust issues arising from insurers' use of third-party data and model vendors. Mr. Birnbaum recommended the Working Group confirm insurers have responsibility for the outcomes that arise from their use of third-party data and model vendors. He also recommended the issues of consumer transparency and avoidance of unfair discrimination and racial bias be addressed. Regarding Workstream Four addressing the regulatory framework/governance, Mr. Birnbaum stressed the need for modernized data collection and market regulation. In addition, he said this Workstream should examine the actual consumer impacts because there are limitations to front-end reviews and model governance procedures. Mr. Birnbaum said these types of regulatory reviews do not guarantee positive consumer outcomes.

Scott Harrison (American InsurTech Council—AITC) said he thinks the work plan is well thought out and appropriately recognizes the impact this work will have on every line of insurance and committee across the NAIC. Matthew Smith (Coalition Against Insurance Fraud) said the Coalition will issue a study in September addressing the use of data and AI/ML to identify insurance fraud. Mr. Smith said the Coalition is beginning this work through a survey and encouraged the Working Group members to contact him if there are questions that they would like to be considered for the survey. David Snyder (American Property Casualty Insurance Association—APCIA) said the work plan looks logical and encouraged the Working Group not to lose sight of how AI/ML has extreme value for consumers, in terms of delivering the kind of products consumers expect and promoting market competition. Regarding Workstream Three, Mr. Snyder said he hopes this Workstream will be completed within the context existing state laws on unfair discrimination.

Superintendent Dwyer said she would review the comments made today and work with the SME lead for each Workstream to make any necessary changes to the work plan. She then requested each Workstream to provide an update on their work in 45 to 60 days during an open Working Group meeting.

### 3. Received a Presentation on AI/ML Survey Work

Mr. Gaffney said Workstream Three has five key objectives: 1) learn directly from the industry about what is happening in this space; 2) get a sense of the current level of risk and exposure and how the industry is managing or mitigating that risk; 3) develop information for trending, such as how the risk is evolving over time, and the industry's responsive actions; 4) become more informed to develop a meaningful and useful regulatory approach for overseeing and monitoring AI/ML in the insurance market; and 5) learn from prior surveys to inform and improve future surveys. He said the initial surveys will allow state insurance regulators to document what the industry reports is happening in the PPA, HO, and life insurance markets regarding use of data and AI/ML and get a good sense of the current level of risk and exposure, as well as explore what companies might be doing to mitigate and/or manage its risk and exposure. Mr. Gaffney then reviewed in detail the additional, preliminary results of the PPA.

Mr. Gaffney said the PPA survey was conducted under the market conduct examination authority of nine states—Connecticut, Illinois, Iowa, Louisiana, Nevada, North Dakota, Pennsylvania, Rhode Island, and Wisconsin—and was sent to only larger companies, defined as those PPA writers with more than \$75 million in direct premium written.

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The nine states received 193 responses, and almost 90% of the companies responding indicated they are using AI/ML in some manner. He said the largest use of AI/ML models is in claims, then fraud detection, marketing, rating, underwriting, and loss prevention. Mr. Gaffney said state insurance regulators are surprised by the results for the rating and underwriting categories as some of the companies that reported no use of AI/ML in these areas have filed rate models in support of their rates. Because of this, the analysis includes an evaluation of the accuracy of reporting.

Mr. Gaffney said 155 of the 193 respondents are using AI/ML in their claims processes, with 113 companies using AI/ML to evaluate images for the claim. He said no companies reported using AI/ML to automatically deny a claim.

Mr. Gaffney said 111 companies indicated they are or will be using AI/ML for fraud detection, and almost all these companies are using AI/ML to refer claims for fraud review. He said only 29 companies use AI/ML to fast-track claims in a determined non-fraud situation. Mr. Gaffney said companies reported using fraud detection models for claims triage, medical provider fraud detection, fraudulent quote detection, organized crime ring identification, and social network analysis.

Mr. Gaffney said about half the companies are using AI/ML models for marketing, with 75% of the companies using their own models and 25% of the companies using third-party vendors. Marketing models are most often used for targeted online advertising. Mr. Gaffney said other marketing models are used to identify potential customers, decide what advertising to do via mail or in print ads, and implement natural language processing for customer interactions.

Mr. Gaffney said 77 companies reported using AI/ML for rating, with 52 companies implementing rating models in production. He said the survey results also reflect that the use of telematics data was prevalent among companies with rating models in production. Mr. Gaffney said around 80% of models being used are developed internally by the companies, which highlights a regulatory need for continued preparation in the states to review independently developed rate models.

Mr. Gaffney said the use of AI/ML in underwriting is similar to its use in rating, with 59 companies indicating they are using or plan to implement AI/ML models for underwriting purposes, with 34 of the 59 companies indicating they are implementing underwriting models in production. He said an important aspect regarding the use of AI/ML in underwriting is the prevalence of externally sourced data elements, with more than 60% sourced from third-party providers. Mr. Gaffney said underwriting models are used for tiering and company placement, input into denials and approvals, renewals and reinstatements, and policy anomaly detection. He said only three companies are currently using AI/ML to identify high-risk customers for loss prevention.

Mr. Gaffney said the goal is to finalize the PPA survey analysis this summer and to present a report to Big Data and Artificial Intelligence (H) Working Group by the Fall National Meeting. He said the report is expected to include recommendations for regulatory guidance to better monitor the use of AI/ML. One idea is to potentially outline some type of risk hierarchy and describe company governance of risks and best practices that support the NAIC's AI Principles.

Having no further business, the Big Data and Artificial Intelligence (H) Working Group adjourned.