How Privacy & Ethics Impact Assessments strengthen AI Governance

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HOW TO PUT ETHICS INTO PRACTICE?

WHY AI GOVERNANCE ?

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DATA ETHICS BACKGROUND

- Possible severe consequences of Big Data Analytics and AI leading to new **legal** and **reputational risks**
- **"Black Boxes"** and **hidden bias** in AI solutions threaten customers' trust
- **High speed of technological development** needs to be monitored without hindering innovation
- New international & cross-sectorial **initiatives to regulate AI** including upcoming EU regulation
- Additional regulatory pressure for insurance industry: **EIOPA** *AI Governance Principles;* **Bafin** *Principles for the usage of algorithms in decision-making processes*

Documents from regulatory authorities & governmental bodies ("Ethics Regulatory Papers"):

- European Commission, April 2019, "Ethics guidelines for trustworthy AI"
- Gov.UK Centre of Data Ethics, March 2019, "2-year strategy"
- OECD Recommendation on Legal Instruments for AI, May 19
- Personal Data Protection Commission Singapore, January 19/20, "A proposed model AI Governance Framework"
- „Datenethikkommission", „Gutachten der Datenethikkommission", Oct. 19
- And many others in New Zealand, Canada and China

AI USE CASES IN INSURANCE

02

EXAMPLES

ALONG THE WHOLE INSURANCE VALUE CHAIN

Product Design

Personalization of Cover
Big Data used to design complex, tailored products with reduced underwriting costs

Pricing & Sales

Individualization in Technical Pricing
Increasing actuarial fairness through more granular risk analysis

Risk Models, e.g. Lapse Model
Probability of non-renewal, e.g. through integration of competitors' pricing

Quote & Buy Solutions
Quote Prefilling & recommending best-fit product coverage

Customer Lifetime Value Analysis
Predicts whether or not the policyholder is profitable by taking into account the whole lifetime of the contract

Claims

Claims Settlement Optimization
Identify claimants likely to accept cash settlement amounts below true claim value

Proactive Loss Prevention
Nudge customers to make decisions that reduce the likelihood of risks materializing

Operations

Automatic Recognition
Recognizing and clustering incoming communications for automatic indexing

Image Recognition
E.g. prediction for repair costs based on image evaluation; selection for cases eligible for cash settlement

Other

Fraud Detection (Underwriting/Claims)
Detecting fraudsters and increasing confidence of non-fraudsters

PRACTICAL GUIDANCE FOR AI IN ALLIANZ

03

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REGULATORY APPROACH

Ethics Regulatory Papers

especially:

- Survey on EU Trustworthy AI Assessment List
- A proposed model AI Governance Framework (Singapore)

Current EU Law

Special focus on **GDPR** (Anti-Discrimination Law, IDD incl. Supplementing Directives, Unfair Commercial Practices Directive)

Interpretation of current EU law in light of Ethics Regulatory Papers

- "User-friendly interpretation" of EU law
- Further measures to enhance customer trust (e.g. Chatbot Rule)

CORE PRINCIPLES & STRUCTURE

1. Principles for responsible usage of AI

Privacy	Transparency	Fairness/ Anti-Discrimination	Human Control	Accountability

2. Implementation Measures *

3. AI Use Cases as Examples

** Including state-of-the-art data analytics techniques*

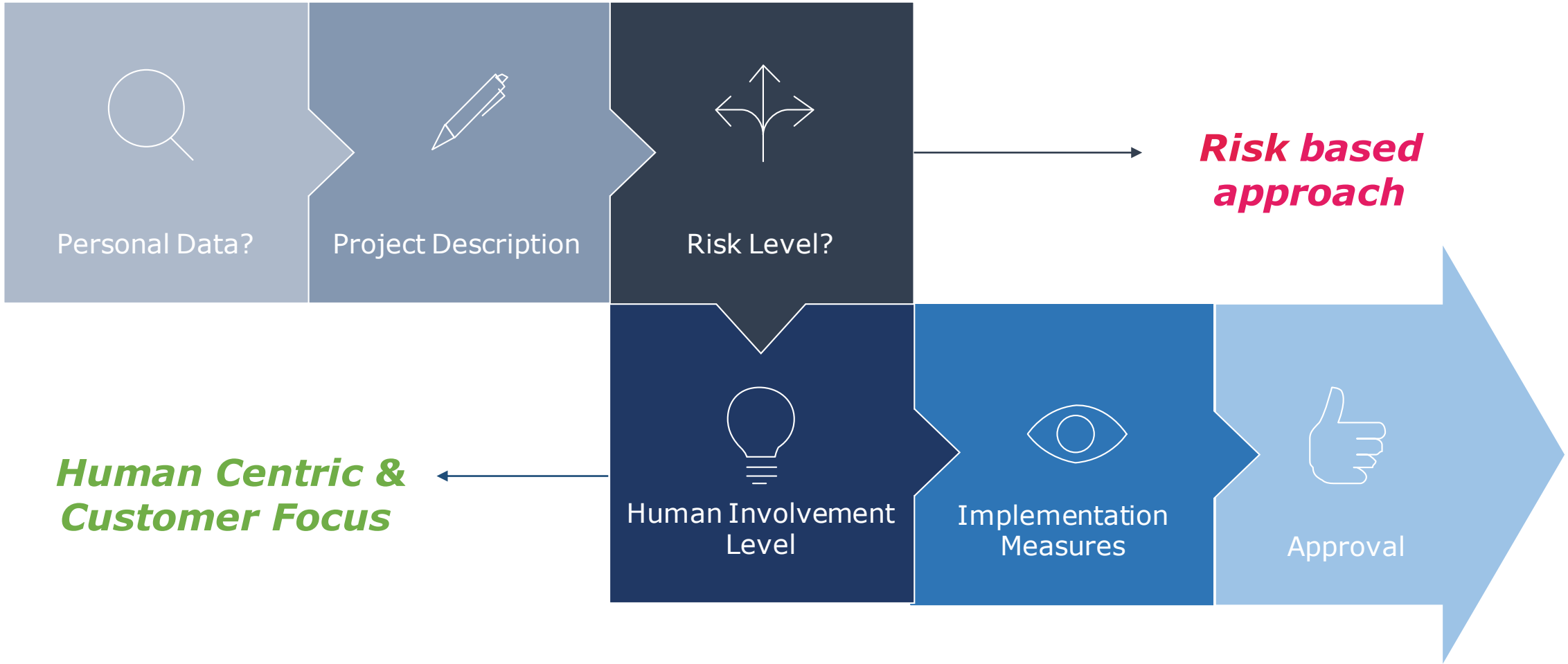
DEDICATED ROLES

Business Responsibility	Safeguarding/Control
Business Owner	Data Protection Officer
Data Scientist	Compliance Counsel
Data Steward	Audit
Data Engineer	
Privacy Champion	

PRIVACY & ETHICS IMPACT ASSESSMENTS

04

FROM PRIVACY TO ETHICS IMPACT ASSESSMENT



GRANULAR AI RISK ANALYSIS

Three Risk Levels

1	low severity/probability of harm	**Low:** a few inconveniences, can be overcome without any problem
2	high s/low p or low s/high p	**Medium:** significant inconveniences, can be overcome albeit with real difficulties
3	high severity/probability of harm	**High:** significant/irreversible consequences, may not be overcome

Case-by-Case-Analysis

- Risk of harm for individuals **depends on the overall application context**.
- **Risk Assessment** needs to be performed on a **case-by-case basis**, considering e.g.:

Data categories **Type of customers** **Customer Impact** **Application Field**

HUMAN-CENTRIC APPROACH

HUMAN INVOLVEMENT DETERMINATION ACCORDING TO RISK LEVEL

1

Human out of the loop

- Internal risk management, control and **monitoring** activities, but **less granular** than in level 2.
- Decision-making can be **fully automated.**

2

Human over the loop

- Human in a **supervisory** and risk management role on an **ongoing basis**.
- Ability to take over control in case of model failure.
- Humans **can adjust parameters** in different phases.
- Automated decision possible.

3

Human in the loop

- Human oversight is active, with the **human** retaining **full control**.
- AI system only provides **recommendations or input** to the end user.
- **Decisions cannot be solely based on automated processing.**

INTERACTIVE TOOL FOR DATA SCIENTISTS, BUSINESS & DPO

OneTrust

PRIVACY, SECURITY & GOVERNANCE

Technology to Power Privacy, Security and Trust

Our modular products give you the visibility, automation and record keeping you need for the laws and frameworks that matter most to your compliance program

Welcome

Allianz

Welcome to the Allianz Global Privacy & Ethics Impact Assessment Tool

You have received a link to this page because your privacy professional has assigned to you the task of completing one or more sections of the **process description** of a privacy & ethics impact assessment for a processing activity being undertaking by you or your colleagues.

QUESTIONNAIRE - EXTRACT

13 **Process Description Submission**

14 **Analytical Activities - Triggers Assessment**

14.1 ✔ *PIA Trigger - High Risk Processing Scenarios

14.2 ✔ *Granular Risk Assessment for AI

***Granular Risk Assessment for AI**

Based on the high risk triggers as choosen in 14.1. a more granular risk assessment (within the high risk) must be performed to better reflect the specific risks inherent in AI based/supported insurance products. Please see also the Welcome Section and the AZ Practical Guidance for AI (deep link).

Please select one of the following granular risk levels in a joint risk assessment with the responsible DPO and upload the respective "Risk Report for Privacy and Ethics Impact Assessments". The granular risk levels are further defined in the AZ Practical Guidance for AI.

High Risk | Medium Risk | Low Risk

14.3 ✔ *Human Involvement Determination

Drag in a question tile from the left, or click to Create a Question

15 **High Risk Processing - Mitigation**

14.3 ✔ *Human Involvement Determination

***Human Involvement Determination**

Based on the results of the granular risk assessment (see the attached risk report under 14.2.) and the determined AI risk level you must choose the corresponding appropriate human involvment level:

High Risk: Human-in-the-loop
Medium Risk: Human-over-the-loop
Low Risk: Human-out-of-the-loop

Only in case of a medium and low risk a fully automated decision-making process may be implemented. The Human Involvement levels are further defined in the AZ Practical Guidance for AI.

Human-in-the-loop | Human-over-the-loop | Human-out-of-the loop

Drag in a question tile from the left, or click to Create a Question

15 **High Risk Processing - Mitigation**

15.1 *Automated Decisions - Record Keeping

15.2 *Automated Decisions - Challenge

AI RISK ANALYSIS

- EXAMPLES*-

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* not meant to present Allianz specific use cases

LIFE INSURANCE & HEALTH ASSESSMENT

Prospect and customer data about health, insured risks and claims are used retrospectively for pricing future offerings in life insurance. Prospects provide personal data such as age, gender, occupation and information on their health status by answering a predefined questionnaire. For certain combinations of responses, an additional medical opinion from the prospect's doctor is requested.

AI Solution

There are basically two models involved: The first one (machine learning model) classifies the request into simple requests and more complex ones requiring additional medical information. The second model, a rule based one, handles the simple cases and provides a risk assessment (defining price and insurance conditions, e.g. additional premiums or risk exclusions).

How would you classify the inherent risk?

A: LOW RISK B: MEDIUM RISK C: HIGH RISK

AI SOLUTION FOR SME QUOTE & BUY

SME Underwriting and Quote & Buy solution based on 3 steps: 1) Business activity classification/prediction based on company websites; 2) Risk parameter prefilling in quotation form (levering external data sources); 3) Prediction and recommendation of best-fit product coverage per risk profile. Customer can correct the prefilled fields and can override/challenge the (non-mandatory) offering/recommendation.

AI Solution

The solution analyses the website information to predict the business activity and extracts information to prefill the quotation form. A subsequent model predicts the best-offer for the profile.

How would you classify the inherent risk?

A: LOW RISK B: MEDIUM RISK C: HIGH RISK

CLAIMS SETTLEMENT OPTIMIZATION

Once a motor claim is submitted, a settlement amount is automatically estimated and proposed to the customer. If the customer accepts the amount, the claim is closed and paid out. Alternatively the customer can decline the proposal and proceed with the traditional claims handling process (e.g. ask for repair/expert damage assessment). Health data are not used.

AI Solution

The solution runs internally and the proposal is communicated to the customer. Models used could vary from image processing to regression models to extrapolate the settlement costs.

How would you classify the inherent risk?

A: LOW RISK B: MEDIUM RISK C: HIGH RISK

REGULATORY OUTLOOK

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Regulatory Developments since 2020

02/20 — EU COM Whitepaper
mandatory conformity assessment for high risk AI (defined by sector & use)

04/20 — EP (JURI) Draft Report* Ethical Usage of AI
stricter fairness rules

04/20 — EP (JURI) Draft Report* Civil Liability for AI
covering high-risk/other AI

10/20 — EP Resolution*
insurance industry as high-risk sector

04/21 — EU COM Proposal for AI Regulation
layered risk-based approach with high-risk AI defined by use/areas

04/21 — EP Report on AI*
objective methodology for calculating the risk of harm

*own-initiative/non-legislative reports

IMPACT ON INSURANCE?

INSURANCE SECTOR MAY BE AFFECTED IN DIFFERENT WAYS

(BASED ON EU COM DRAFT 04/21)

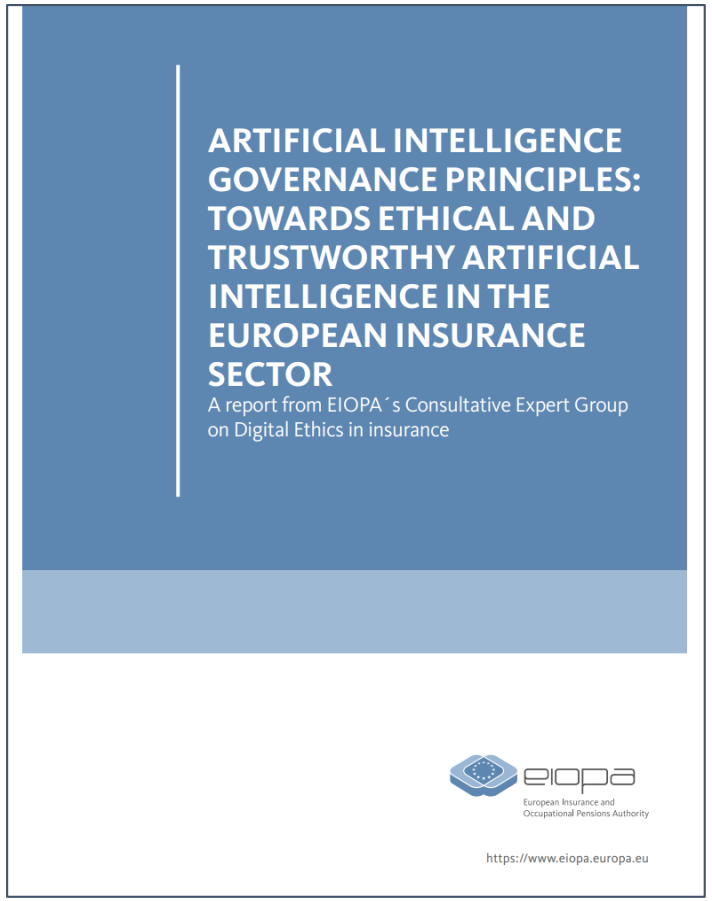
- **Very broad definition of AI** including statistical methods
- Could **prohibited AI practices** like "subliminal manipulation" include **marketing activities?**
- Various **HR applications** and AI systems used to evaluate the **creditworthiness** of individuals defined as **high-risk AI**
- **Annex III** listing high-risk AI could be **changed** by EU COM annually

- **Enhanced transparency** requirements for **chatbots**
- **European Artificial Intelligence Board** could lead to new supervisory level
- **Voluntary certification** for *non* high–risk AI refers to requirements for high-risk AI
- **Regulatory sandboxes** for start-ups impacting level playing field?

EIOPA AI GOVERNANCE PRINCIPLES

REPORT FROM EIOPA EXPERT GROUP ON DIGITAL ETHICS IN INSURANCE

(PUBLISHED IN 06/21)



- **Risk-based guidance** on how AI governance should be organized.
- Different pieces of **legislation** (e.g. Solvency II, IDD, GDPR, e-PR, Anti-Discrimination Directives) should be **applied in a systematic manner** and require unpacking to assist firms understand what they mean in context of AI.
- Ethical use of data & AI implies a **more extensive approach than merely complying with legal provisions** to consider societal implications as well.
- **Governance Principles** include proportionality, fairness & non-discrimination, transparency & explainability, human oversight, data governance, robustness.
- Insurance firms should conduct **AI use case impact assessments** to determine appropriate mix of governance measures for each use case. Proposed framework leverages on already existing mechanisms (DPIA; ORSA).
- **Fairness Principle** especially **restricts** certain data usage (behavioral data, social media) and price/claims optimization practices **considering overall conduct risks**.

BIOGRAPHY

As **Digital Compliance Counsel at Allianz SE,** Sarah Johanna Zech advises on compliance matters, especially Privacy and Data Protection, in the digital space including Big Data & AI and Data Ethics. She oversees the Group privacy compliance within the Allianz SE Business Transformation division and steers global regulatory implementation projects with regard to digital business.

Prior to joining Allianz, Sarah worked for about five years as attorney-at-law in different law and audit firms with a special focus on financial regulation matters (MiFID II, PSD 2, AIFMD etc) and compliance. She gained extensive experience in internal investigations in investment banking and also in advising a wide range of clients in the financial sector, particularly credit institutions, investment firms, investment management companies and Fintech companies. Sarah holds a second degree (Magister Artium) in art history and philosophy.

ABOUT ME

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