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# Life claims through augmented intelligence



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## Context

Generation-Z is using digital technologies since young age and is comfortable with the internet and social media. As a result, their service expectations from insurers are very high. One of the major target groups of the insurer happens to be the Gen Z segment which plays a vital role in the growth of the carriers.

Life insurance contracts are long term in nature which requires high level of customer satisfaction for creating new business opportunities, competitive edge, and customer retention. Customer touch points starts from need analysis and getting quotes to submitting applications for risk coverage, financial and non-financial changes, claims settlements, and so on. Satisfied customers are the greatest assets of the insurers as they spread positive messages upon experiencing a delightful service. Insurers currently looks at all possible opportunities in improvising their business processes through effective enterprise architecture coupled with advanced technologies to retain their customer base and sustain competition.

This article focuses on the capability of augmented intelligence (**Au-I**) in processing claims, which is one of the important customer service area that creates the brand image of the carrier. Augmented intelligence (not technically different from artificial intelligence) gives a different perspective on technological advances and emphasizes the fact that cognitive technology is designed to enhance human intelligence rather than replace it. We should relate the term '**Au-I**' as augmented intelligence throughout this article.

## Business challenges in claims process

The service experienced by customers during claim settlement is one of the critical factors for insurer's growth. An efficient claim process with optimal service standards helps insurers to enhance customer confidence, reliability, and improve the top and bottom lines. Some of the important challenges of insurance claim management includes -



Quicker settlements



Data security threat



Fraud detection



Adherence to regulations



Identification of invalid claims



Inefficient claim processes



Lack of consistent service quality



Unclaimed cases



Poor integration of surround systems



Liaison with reinsurers



Data inaccuracy



Pressure on rising operational costs

# Measures to overcome the challenges

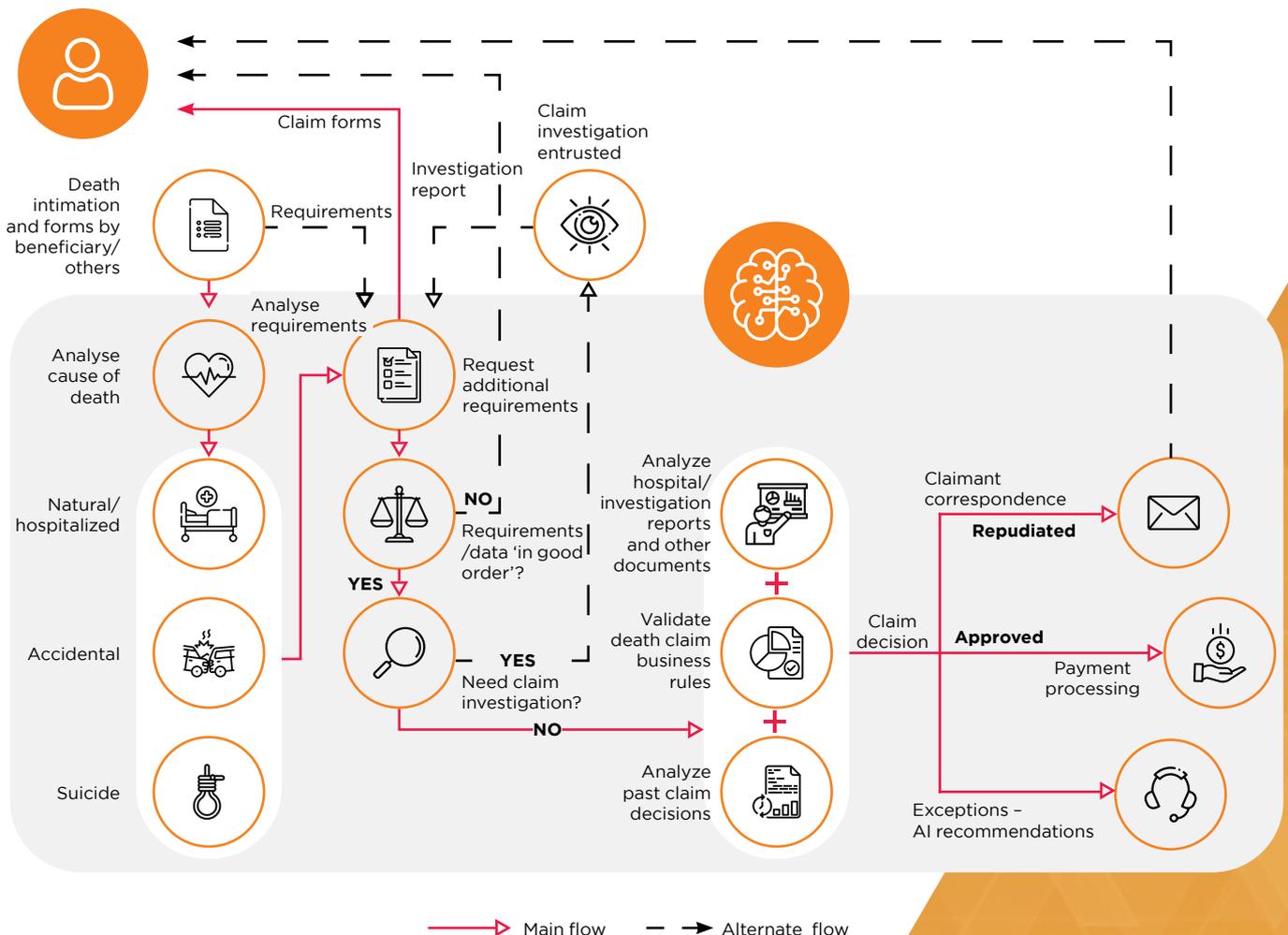
Insurers across the globe are focusing on improving their customer services, of which, speedy settlement of claims is of top priority. Different insurers take different steps that would suit their business goals and enterprise architecture. Some of the measures generally taken are -

- Modernize/enhance the existing claims administration
- Replace with a new claim management system, either homegrown or third party product (COTS)

Each of the above measure has got its own merits and demerits which depends on the carrier's IT landscape. However, irrespective of the method applied, augmented Intelligence (Au-I) plays a vital role in quick and efficient claims processing. Let's see how claim process flow could be improved using augmented intelligence in insurance.

## Death claim processing through augmented intelligence (Au-I)

The claims business process currently followed by many insurers are not seamless and requires manual intervention in many steps. A detailed analysis of the business processes and its underlying systems would help insurer to decide the future state of the claims management. The diagram below depicts a representative view of the ideal claims business process flow supported by Au-I.



The death claim notification is registered by the business user in the claims system. An effective RPA component could help to make preliminary checks and decide whether the requirements are in good order (IGO) to process. IGO cases are routed to Au-I engine which would help to identify the claim type, cause of death, and investigation requirements, as the first step.

Next, the **Au-I** engine evaluates the claim forms, validates applicable business rules, analyzes hospital/ investigation reports and arrives at an 'initial decision'. This decision is then compared with the historical claims decisions of the insurer to arrive at the 'final decision' depending on whether the claim is either settled or rejected. However, if the **Au-I** engine considers a case to be 'complex' (<5% chance), it would forward the same to the 'claims analyst' with its recommendations, to arrive at the 'final decision'.

## Sample use case – Early death claim due to cardiac arrest

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Let's look at the following scenario –

<b>Life assured</b>	Mr. Joseph	<b>Risk commencement</b>	10th Oct 2018
<b>Age</b>	38	<b>Last premium paid</b>	10th Oct 2019
<b>Cause of death</b>	Cardiac arrest	<b>First unpaid premium</b>	10th Oct 2020
<b>Hospitalization</b>	Yes	<b>Date of death</b>	15th May 2020
<b>Sum insured</b>	\$2,000,000	<b>Plan</b>	Term insurance
<b>Mode</b>	Yearly	<b>Beneficiary</b>	Mrs. Adentia (Wife)

The documents are scanned, images stored, and a case is created in workflow by the operations team. As a first step, the **Au-I** claims module would derive the policy status which in this case is 'live'. It'll then analyze the forms submitted by Mrs. Adentia and understands the cause of death as 'cardiac arrest'. It observes that Mr. Joseph was hospitalized for few weeks for haemochromatosis. It further analyses the hospitalization/claim forms to check related diseases/issues of the patient and records all available inputs in a bucket (1a). At this stage, the claim is considered as eligible and hence the **Au-I** engine proceeds further.

Since the death has taken place within two years of commencement of risk, the **Au-I** engine treats this case as 'early claim' and triggers 'investigation' per business rules. As per a business rule, the death of the insured within two years' of commencement/reinstatement of risk with a sum insured of >\$1,000,000 requires investigation by a third party investigation agency. Upon receipt of the report, it checks for associated reasons for death and records all available inputs in another bucket (1b).

The claim investigation report indicates that one of the reasons for death could be the 'smoking' habit of the deceased. The **Au-I** engine moves further to retrieve the proposal data, so as to rule out suppression of material facts. Mr. Joseph had declared himself as a smoker which facilitated the engine for further processing. The data elements from the proposal are retrieved and stored in a bucket (1c).

As we could see, so far, the engine had collated all necessary/relevant info from claim forms, hospital records, investigation reports, customer database, and placed in appropriate buckets (1a, 1b and 1c). The next important task of the **Au-I** engine is to apply the business rules on the

data made available in different buckets, to evaluate the merit of the case. The observations for possible decisions are stored in a bucket (2).

The differentiating factor of **Au-I** is to understand the basis of past decisions made by the insurer. In this step, the **Au-I** engine identifies the relevant past decisions based on the cause of death and applies those decisions to the data points collated in different buckets (1 and 2). This helps the engine to arrive at the final decision of whether to accept, repudiate, or move the claim to exceptional category (for manual process).

Mr. Joseph's death claim case is accepted/approved by **Au-I** engine, as the personal data, family info, hospitalization records, and investigation reports have not revealed anything adverse. Further, most of the past decisions of similar death claim cases have also been approved by the business team. Hence, our **Au-I** engine has successfully approved the claim in favor of Mrs. Adentia and the claim proceeds are credited to her bank account. The turnaround time (TAT) of the **Au-I** supported claims process starting from intimation of death to settlement is very less compared to the traditional method.

Let's say the data collated by the Au-I engine would look like the below -

The Au-I engine would correlate the business rules with the data of the life assured and past decisions of the insurer as shown below and arrive at the final decision.

## Deceased data:

LA_DATA #	Deceased (Life Assured) data
LA_DATA_0001	Collate date, time, cause and place of death from the claim forms
LA_DATA_0002	Collate date, time, and place of accident, if applicable
LA_DATA_0003	Identify the nature and duration of illness reported by last treating physician
LA_DATA_0004	Identify the cause of death reported by last treating physician
LA_DATA_0005	Identify the duration and cause of death as per post mortem report, if applicable
LA_DATA_0006	Identify the duration and cause of death as per police report, if applicable
LA_DATA_0007	Identify the duration and cause of death as per Investigation report, if applicable
LA_DATA_0008	Identify medical leaves availed by LA in last three years, if applicable
LA_DATA_0009	Identify the first complaint of symptoms by the life assured and the date of payment of last premium, to rule out policy reinstatement post illness
LA_DATA_00010	Identify the hospitalization reasons with details of all illnesses, if applicable
LA_DATA_00011	Identify the illnesses declared at the proposal/reinstatement stage

## Business rules:

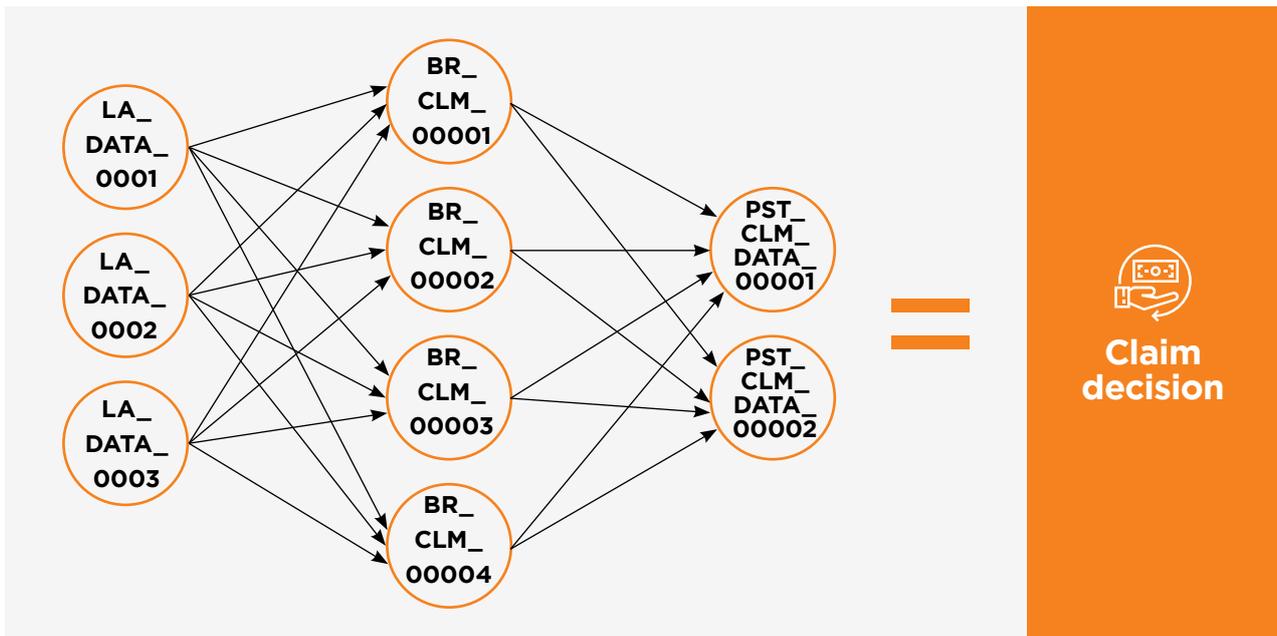
Rule#	Business rules
BR_CLM_00001	Process claim, if status of the policy as on date of death falls under one of the eligible categories. Example - live and fully paid-up statuses are eligible and 'lapse' and 'surrendered' are not eligible.
BR_CLM_00002	Process claim, if last premium paid is before date of death.
BR_CLM_00003	Process claim, if date of death takes place within applicable grace period of a policy, even if the premiums are not paid up to date.
BR_CLM_00004	Generate 'death claim requirements pack' if the case is eligible as per BR_CLM_00001 to BR_CLM_00003.
BR_CLM_00005	Based on personal health facts submitted at proposal stage, identify associated illnesses if any, behind the death of the LA.
BR_CLM_00006	On the basis of medical /investigation/accident reports, identify material facts if any suppressed by the deceased at proposal stage.
BR_CLM_00007	If the policy has been reinstated in the last six months, apply the death details and identify suppression of material facts if any.
BR_CLM_00008	Based on the medical/investigation/accident reports, identify the scope for 'suicide' or 'murder' of the deceased.
BR_CLM_00009	Identify the occupational hazards if any, behind the death.
BR_CLM_00010	Arrive at the final decision on admissibility of claim based on the outcome of rules - BR_CLM_00001 to BR_CLM_00010.

## Past claim data:

PST_CLM_DATA#	Policy#	LA Name	Cause of death	Associated illnesses	LA Health details at proposal stage	Final decision on claim admissibility	Reasons for claim decision
PST_CLM_DATA_00001	7610 27001	Tom Hanks	Blood Cancer	Weak immune system, Splenomegaly	Nothing adverse	Admitted	Material facts not suppressed at proposal stage, hospital records does not throw any adverse factors.

<b>PST_ CLM_ DATA#</b>	<b>Policy#</b>	<b>LA Name</b>	<b>Cause of death</b>	<b>Associated illnesses</b>	<b>LA Health details at proposal stage</b>	<b>Final decision on claim admissibility</b>	<b>Reasons for claim decision</b>
PST_ CLM_ DATA_ 00002	7610 27002	Leonardo	Heart attack	Hypertension, Arrhythmia	Hypotension	Admitted	Material facts not suppressed at proposal stage, claim form does not throw any adverse factors.
PST_ CLM_ DATA_ 00003	7610 27003	Samuel	Kidney failure	High Blood Pressure, Accute Renal failure	Nothing adverse	Repudiated	Accute renal failure at the proposal stage was not disclosed.
PST_ CLM_ DATA_ 00004	7610 27004	Robert	Diabetes	Obese	Smoker	Admitted	Material facts not suppressed at proposal stage.
PST_ CLM_ DATA_ 00005	7610 27005	Johnny	Liver dysfunction	Obesity, heavy alcohol use	Smoker	Repudiated	Use of alcohol has been suppressed at proposal stage.
PST_ CLM_ DATA_ 00006	7610 27006	Jack	Cardiac arrest	Coronary heart disease	High Cholesterol	Repudiated	Policy reinstated post identification of coronary heart disease by suppressing the facts.
PST_ CLM_ DATA_ 00007	7610 27007	Tom Cruise	Renal disorder	Blocked urinary tract	Gastro intestinal disorder	Admitted	Material facts not suppressed at proposal stage.
PST_ CLM_ DATA_ 00008	7610 27008	Will Smith	Diabetes	Family history	Nothing adverse	Admitted	Material facts not suppressed at proposal stage.
PST_ CLM_ DATA_ 00009	7610 27009	Jim Carrey	Alzheimer's disease	Tuberculosis	Heavy alcohol use, smoker	Admitted	Material facts not suppressed at proposal stage.
PST_ CLM_ DATA_ 00010	7610 27010	Adam Sand	Heart failure	Stroke, peripheral heart disease	Nothing adverse	Admitted	Material facts not suppressed at proposal stage, Hospital records does not throw any adverse factors.

The **Au-I** engine would correlate the business rules with the data of the life assured and past decisions of the insurer as shown below and arrive at the final decision.



## Business benefits

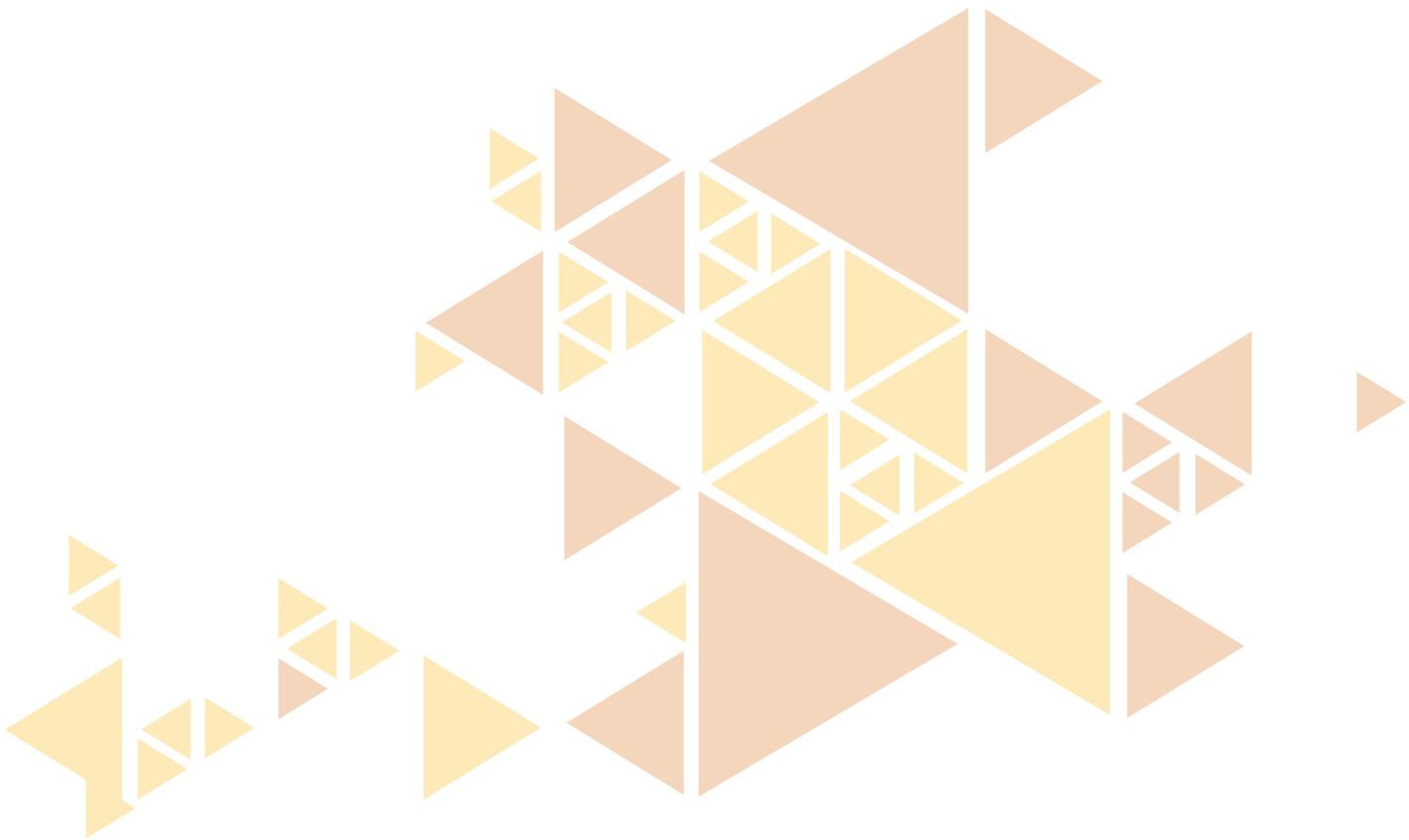
- The entire process of claim – from filling the forms to receiving the amount in a bank account happens within a short time
- The entire process is completely automated without any human interference or prejudice
- All necessary information is extracted from medical documents - diagnosis reports, discharge summaries and other associated evidences
- Au-I engine looks from the angle of genuineness of the information and records its observations to rule out fraudulent claims
- The engine has the capability to extract line items from a scanned medical/police reports
- Au-I engine transforms the insurance claims cycle with greater accuracy, speed and productivity, at a fraction of the cost
- It also delivers enhanced decision making capabilities and superior customer experience

## Conclusion

The insurance industry is looking to adopt augmented Intelligence (**Au-I**) applications for a variety of business functions due to its access to large volume of customer data which eventually would provide better customer experience, quick and quantitative outputs, reduced operational costs, and competitive environment. Many InsurTech companies are bringing out different solutions in insurance space either on their own or through joint ventures with major insurers. According to EMERJ, a research organization, approximately 46% of AI vendors in insurance industry offer solutions for claims and 43% offer solutions for underwriting. Many analyst reports states that ten years down the line those insurers who lack **Au-I** capability are likely to lose significant market share to their competitors. Further, introduction of **Au-I** in claim process are required for their sustenance and growth. Thus players are focusing more on **Au-I** technology which is expected to be the insurance industry norm shortly.

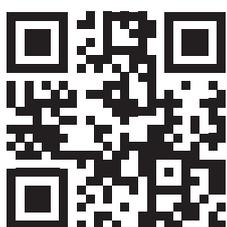


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