



Mindtree

A Larsen & Toubro Group Company

Business Process Management (BPM) maturity levels in claim handling



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Introduction

One evening, Praveen met with an accident and his car was damaged. He had insured his car from ABC, an insurance company. Since Praveen is new to city, he had to spend a few hours to find the nearest car service center and contact them, after which, he took the car to the service centre with their towing service. Since it was night already, the insurance team was not available at the service center; Praveen had to leave the vehicle and go home.

The next day, he went back to the service center to fill the claim application by providing all the required documents.

On the third day, ABC's insurance claim inspector called Praveen during his office hours to know more details about the accident and location. The inspector also collected photos that Praveen took at the accident location.

With another few days of following up, Praveen's claim got approved, covering 80% of the repair expense. His vehicle was repaired in the next two days. Overall, it took five days to process the claim.

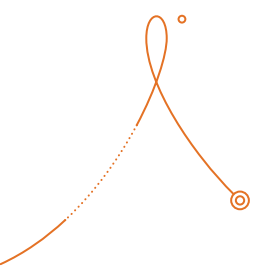
The same evening, Naveen met with an accident and his car was damaged. He had insured his car from another insurance company, XYZ. Naveen then opened XYZ's app on his smartphone, chose his prepopulated car insurance policy details and clicked on 'Initiate Claim.' The app prompted him to upload the photos and location of the accident through a map. Within 10 minutes, Naveen got a call from a nearby car service center and to his surprise, they said they would go to the location with their tow vehicle. They took his vehicle to their repair center and Naveen went home.

The next day, when Naveen was at work, he got an SMS stating that his claim is in progress and that the damaged car is under inspection to assess repair cost. He was able to track the status of his claim on the app. After two hours, he got another SMS stating that 80% of the repair expense was approved.

Naveen's vehicle got repaired in the next two days. Overall, it took him less than two days to process the claim.

Evidently, XYZ was able to process claim quickly, at almost double the speed of ABC. In addition, more than the time taken, XYZ helped provide a fabulous one-touch claim processing experience to its customer. This was possible because they have matured business processes and systems in place, whereas ABC has many manual processes.

In this white paper, we will understand the claim processing journey and various maturity levels that companies should strive for.





Insurance companies – challenges

An insurance enterprise usually comprises complex IT systems. Companies, especially those operating in multiple business lines like life, general and health insurance, will have a plethora of challenges as these business units usually work in silos – in the sense, they have separate financial budgets and targets, and are run by different business heads. Each business unit has a bunch of products and the number keeps increasing with time and competition in the market. These challenges aggravate when companies go for with Mergers and Acquisitions, which lead to duplication of products, IT systems and teams.

Insurance companies usually thrive to improve in the following areas - Reduction in operating expenses, cycle time improvement, customer satisfaction and quick change of business product mix. IT companies always need to come up with new ideas and advanced technology solutions to address these expectations.

Below are the main business functions of an insurance enterprise having identifiable business processes, which can be improved/automated:

- Underwriting
- Policy Administration
- Claim Handling
- Customer Lead Management
- Billing Systems

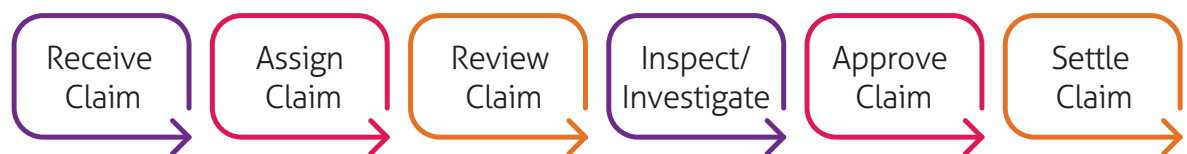
We will understand the claim handling process in this paper.

Claim Handling Process

A claim can be received through multiple channels like –

- Paper document/post received by front office,
- Online requests
- Electronic documents like email, fax, phone call etc.

After receiving the claim, it has to be routed/assigned to the correct handler team based on different parameters. The claim handler verifies the claim, cross-checks the policy document and refers it for investigation/inspection. The claim can also be transferred to other claim handling teams if it requires their approval as well. Based on the inspection report, the handler can approve/reject the claim partially/completely. Once it is approved, the claim amount is settled through billing systems.

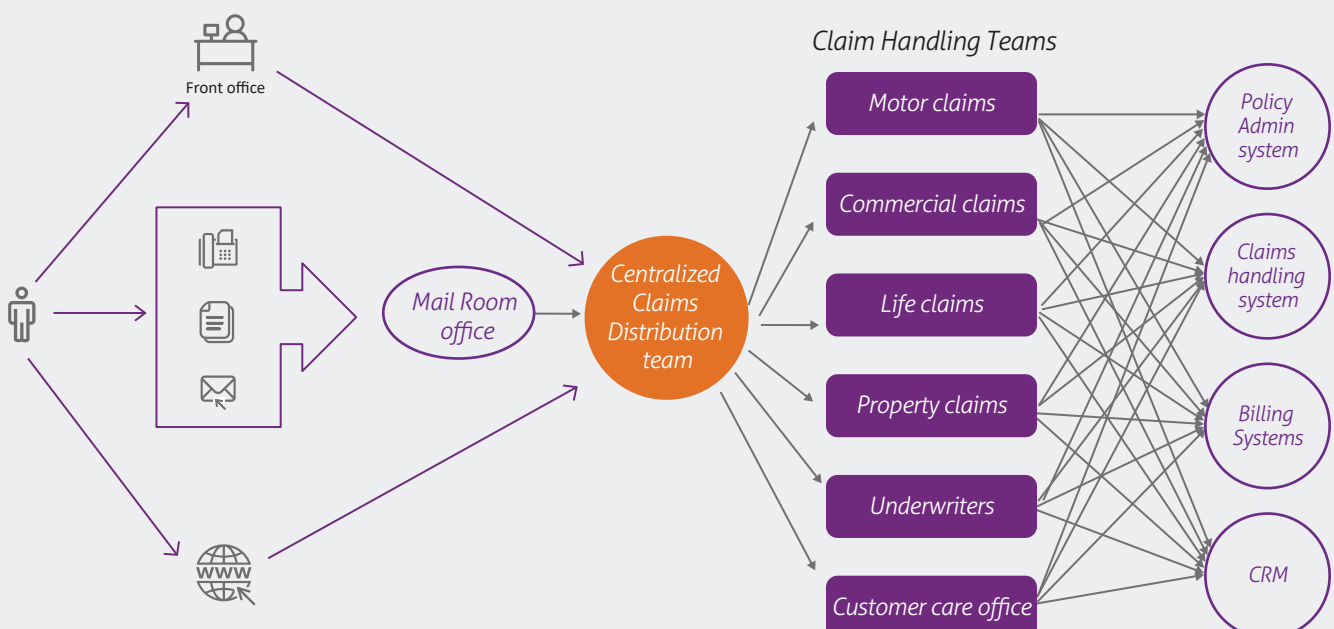


Maturity levels:

We can classify the maturity levels of an enterprise as Ad-hoc, Standardized, Integrated and Optimized. We will understand them in detail.

Ad-hoc Maturity:

In this maturity, most processes are manual. The claim handler needs to login to multiple applications and perform repetitive data entry tasks.

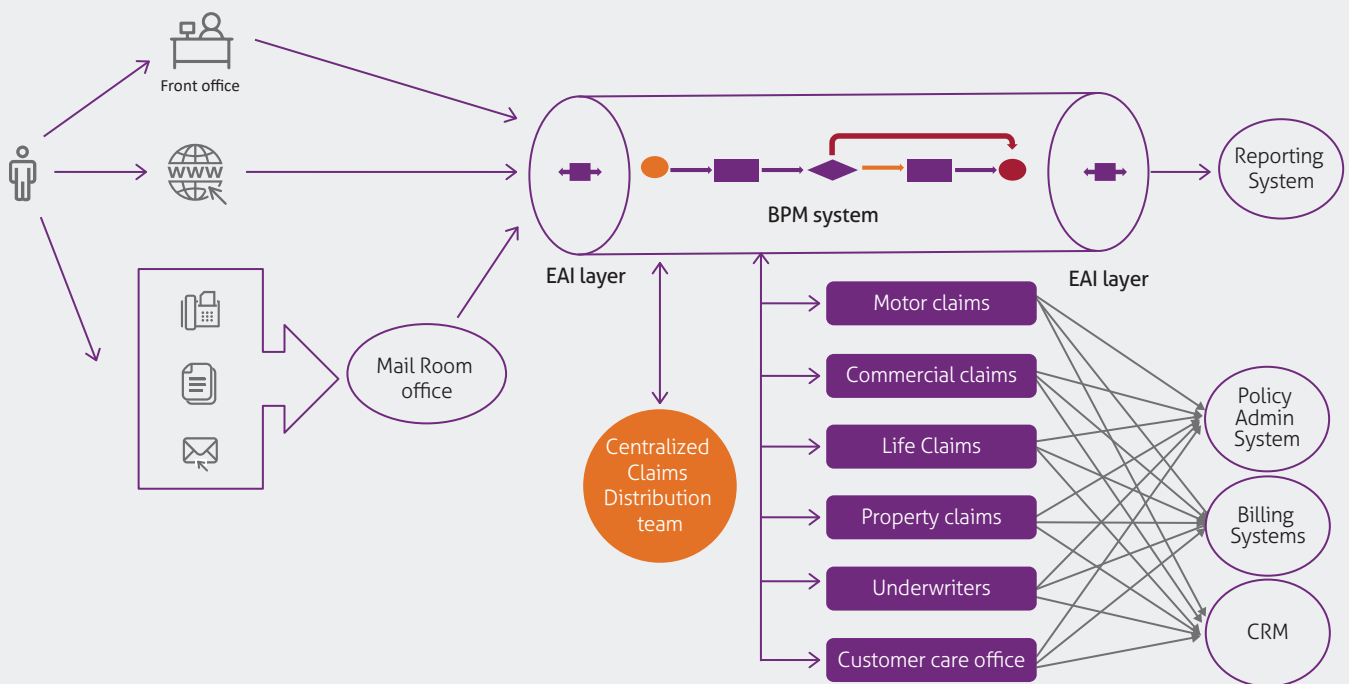


Claims are received through different channels like emails, physical documents, post, fax etc. A central team goes through each claim and decides on the team that should work on it. This work is mostly manual and repetitive, and many supervisory tasks are needed to follow up with the teams.

Claim handlers need to login to multiple applications (like Policy Admin system, Billing system and CRM) to process a claim. Knowing the exact status of a claim is a challenge to the customer service team, since they may need to contact multiple claim handling teams. Transparency of the process is very minimal. Productivity of teams cannot be accurately measured, as there is no clear handover of the tasks. When teams are located across different geos, the complication grows multifold.

Standardized maturity:

In this maturity level, enterprise would have implemented a Business Process Management (BPM) system to track the flow of claim. However, this BPM flow would not cover the end-to-end journey of a claim.

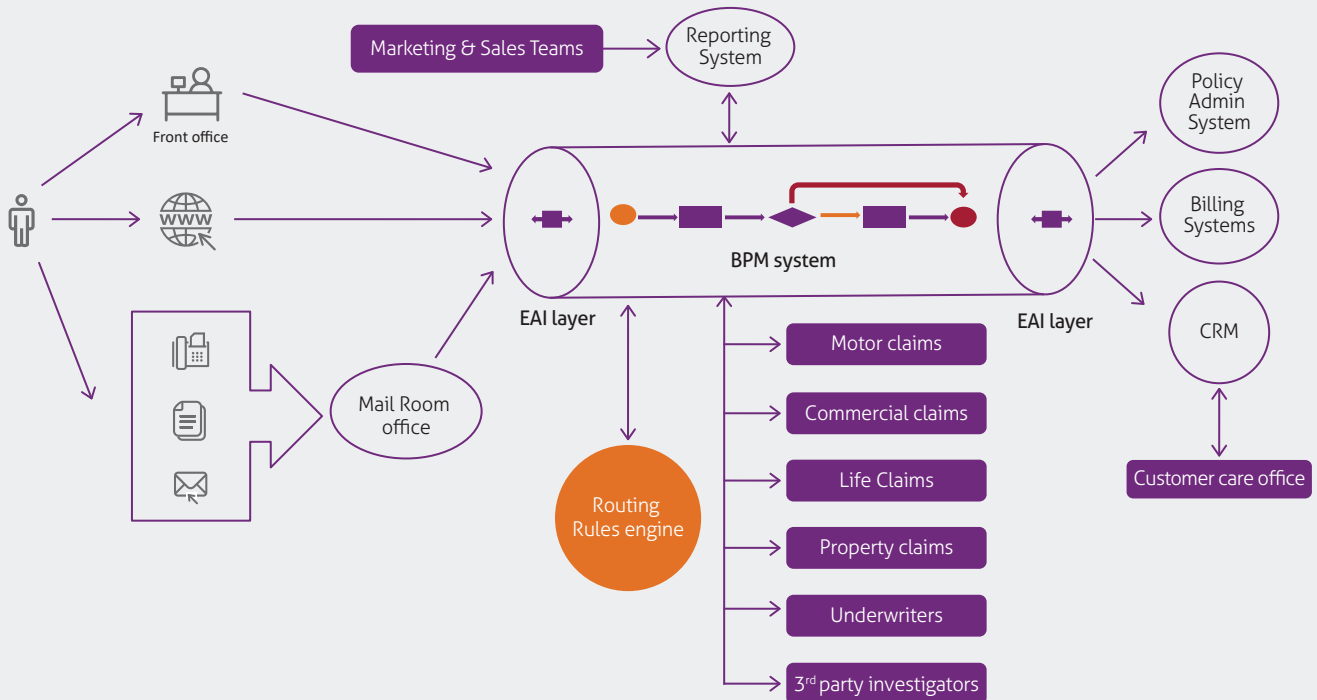


Once the end customer requests an online claim, it triggers the BPM workflow. The claims received through other channels like post/hard copy still need to go the mail room, scanned and data entered manually into an application to trigger the BPM workflow.

The claim requests create actionable work items for the centralized claims distribution team. Distribution of these claims (work items) to handler teams is still a manual process. Claim handlers still need to login to multiple applications (like Policy Admin system, Billing system and CRM) as they are not completely integrated with the BPM workflow. The customer care office can look into the BPM system to know the live status of the claim case. For reporting, BPM workflow has to explicitly publish the required data to a database or a reporting system. There is no in-built reporting system within BPM.

Integrated Maturity:

In this maturity level, enterprise would have end-to-end workflows within the BPM system that are completely integrated with other applications.



In this maturity, claim handlers can complete their assigned work items using the smart phones/tablets. Similarly, customers get claim updates and reminders on their phones through SMS/E-mail. A centralized claim distribution team is not required, and the rules engine automatically routes the claim to the correct team. Also, BPM system is matured enough to route the claim based on skill set of the claim handler and his/her availability.

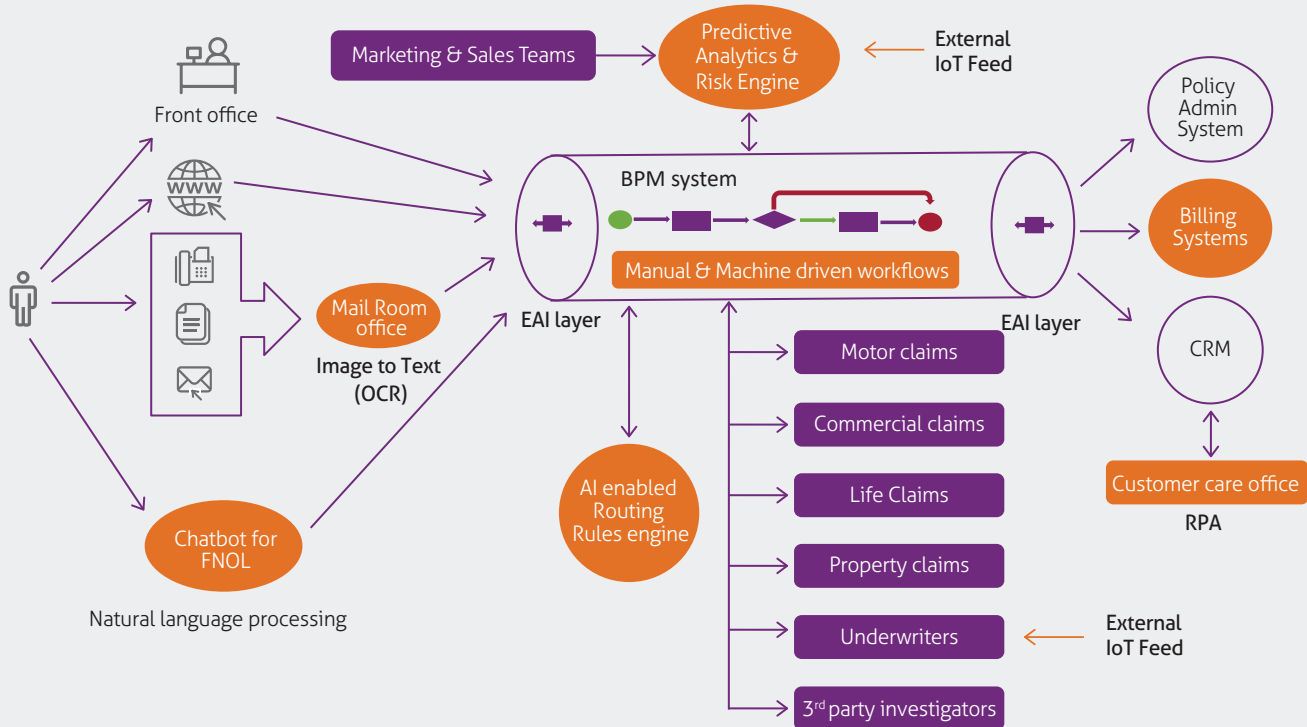
The BPM workflow has seamless integration with other applications (like Policy Admin system, Billing system and CRM), such that a single application can be used to perform end-to-end claim processing. It also integrates with third-party agents so that they can directly upload their inspection/investigation reports and evidences to process the claim. Also, all the communication between customer/third-party/claim handler is recorded within the BPM workflow.

In this maturity, the claim approval is partially automated with static rules based on a few parameters, for example, claim amount and product type. The CRM/helpdesk system is integrated with the workflow, such that the customer care office team can get the live status directly through their day-to-day application.

For reporting, BPM system has an inbuilt component, which can be configured to create various reports. Also, this can be easily integrated with the enterprise reporting system, if required.

Optimized Maturity

In this maturity, enterprises use machine learning/AI techniques for intelligent and quick decision making for low value transactions. Also, the usage of AI opens up new business models and ways of working for the enterprise.



Claim initiation process:

For the mail room, where a lot of manual data entry activities are involved, image-to-text (Optical Character Recognition) processing techniques are used to reduce the manual activities and increase accuracy. An NLP-based interactive chatbot can be built for claim process initiation (First Notice Of Loss – FNOL). The chatbot can be made available through a mobile app or end customer website. The chatbot can be enhanced to a voicebot, where it uses speech recognition techniques.

The claim initiation process can provide a more enriching experience to a customer. For example, for a car damage claim, an app fixing an appointment with the nearest available car service center based on their free time slots available. This can only happen with seamless integration with third party schedule inventory.

Workflows -

In this maturity, BPM flows can be designed in two categories, namely those that require manual intervention, and those that are intelligent and machine-driven, either partially or completely.

The AI-enabled routing rules engine routes the claim to an automated workflow if the predicted journey (for example with 90% accuracy) does not require the claim handler's decision making. The claim handler's decision is also fed back to AI algorithms so that they can self-learn to convert future manual workflows into automated flows.



Claim review

AI can also help in fraud detection based on certain features/parameters of the claim. These AI algorithms keep learning constantly, thus saving a lot of the claim handler's time.

Another area where AI can be used in the claim journey is to estimate damages through image recognition. The accuracy of algorithms keeps improving by providing the actual cost as a feed.

Automation of repetitive work

Claim handlers spend lot of time in the manual review of invoices given by third parties (for example, car repair invoices from service centers). Standardizing the invoice format and digitizing it will help automate the invoice review process.

Robotic process automation (RPA) can be used to automate repetitive back office operations like customer name update, address update, phone update etc. RPA can pick each customer request from the ticketing tool, triage it and perform the required basic actions. This will save an enormous amount of time for back office teams, and help them focus on more complex tickets.

Enabling new business models

Insurers can use predictive analytics on the volumes of claims and their trends to assess the future risk on a day-to-day basis and work on de-risking strategies. In addition, these analytics act as a backbone to price their products and gives direction to their marketing and sales teams.

With the evolution of IoT, there are huge volumes of data available in various industries. For example, there are mobile apps/watches that measure health parameters. There are sensors set up in automobiles that can measure the wear and tear of various parts of vehicles. The insurance industry can tie up with these companies and take advantage of this data to come up with personalized pricing models. This will enable underwriters to come up with better quotes and reduce future risks to the organization

How to measure maturity?

In the current fast-paced competitive environment, it is paramount for insurance carriers to provide enriching experiences to customers along with improved cycle times in the claim handling process. This can be achieved through better business process management systems in place.

“What gets measured, gets improved.” – Peter Drucker

The maturity level of a claim handling process can be measured based on the following dimensions:

- Technology Capabilities
- Customer Experience
- Employee Productivity
- Process Maturity
- Support of New Business Models

The below table explains the maturity level for each of these dimensions:

Maturity Levels

Dimension	Category	Ad-hoc	Standardized	Integrated	Optimized
Technology Capabilities	Workflow orchestration	Multiple discrete applications are used for claim handling, there is no machine-driven orchestration/workflow between the applications.	BPM system is in place with partial workflow of the claim handling process.	BPM workflow orchestrates the end-to-end process of claim handling.	BPM Workflows are built into two categories – 1) Require manual intervention 2) Intelligent and machine driven.
	Application integration	Applications use legacy technologies and there are no standard interfaces to integrate with other applications.	Application integration interface guidelines are standardized. Few of the applications are integrated with the BPM flow.	Applications are connected using SOA principles. Applications interact over standard enterprise service bus. Well -defined EAI interfaces which can be reused across all workflows	Functionalities are divided into smaller microservices which interact with standard APIs. Most of the operations within the enterprise have defined APIs for all the standardized operations.
	Third party integration	Few third party partners are integrated using FTP - EDI transport method	Many third party partners are integrated using the SFTP - EDI transport method.	Backend bulk/batch file transfer happens over SFTP. The UI operations which require immediate response are integrated through HTTPS.	API gateway is in place to integrate third party partners who are outside the enterprise network.
	Security	Basic username-password authentication is used	TLS protocols are used.	SSL and public-private key authentication mechanisms are used during application/3rd party integration	SAML and Oauth are used for single sign-on & authorization.
	Analytics/Reporting capability	Through consolidating multiple data sources in ad-hoc ways	Developer built reports with the required data published from BPM workflow.	BPM system has in-built reports which can be customized.	On top of the BPM built in reports, predictive analytics are used.
	AI/Machine Learning	-	-	-	Image recognition techniques, Chatbots using NLP, Voice bots using speech recognition techniques, Image to Text (Optical character reading) algorithms and RPA is used
	Customer experience	Transparency on claim process	Low transparency on the claim process.	Partial transparency on claim process.	Full transparency on claim process. - Customer is informed about all the stages involved.
Claim initiation channels		Front office, email, fax, phone calls	End-customer website	Mobile app	Chat bot available for Claim initiation/ FNOL process.
Claim status		Claim status is enquired/informed over phone calls	Customer gets SMS/email about the claim status and the team/person who is dealing with the claim.	Customer can check the status on the Mobile App. Also, App will notify the customer when there is change in the claim status.	Customer can interact with chatbot to know more about the claim status
Ease of documentation/process		Need to upload all the relevant documents and invoices manually	Need to upload all the relevant documents and invoices manually	Trusted partners - When customer is dealing with the trusted partners (for example - network hospitals, authorized vehicle repair shops), required documents are uploaded by the Trusted partners.	Chatbot can book the appointment with the third party partners based on the availability of the third party inspector. For example, in an auto claim, the vehicle damage needs to be evaluated and fixed by an authorized repair shop.

Maturity Levels

Dimension	Category	Ad-hoc	Standardized	Integrated	Optimized
Employee/third party partner productivity	Number of applications used	Need to use multiple applications during claim lifecycle	Claim handlers use the BPM system to know the claims/work assigned to them but they still need to use multiple applications to complete claim journey.	Single application used for complete claim journey.	Single application used for complete claim journey.
	Ease of doing things	Handover of work between teams happen through mails or phone calls. Lot of administrative tasks to coordinate work between different teams.	The BPM system takes care of work delegation between teams. Third party work is still managed through mails or phone calls.	Investigators/inspectors use mobile apps/tablets to capture and upload the evidence or documents from the incident location. Employee/third party partner can complete their tasks over mobile application/tablet.	Customer himself can capture the firsthand evidence/photo/video and upload during FNOL process, and need not wait for the inspector to come and capture the evidence.
	Data entry tasks	Mail room team which receives all the claims through different channels enter data manually into multiple(more than three) applications.	Manual data entry is required for one or two applications.	Manual data entry is required for single application.	Image to Text (Optical character reading) algorithms used in claim initiation process removes the manual data entry overhead. RPA can be used for automating basic customer service requests (Updating name, phone, email etc.). It can pick each customer request from the ticketing tool, triage it and perform the required basic actions.
Process maturity	Claim categorization/ distribution	Distribution(Routing) of claims to different teams is manual.	BPM systems takes care of Routing of claims to teams based on few identifiable parameters of the claim.	Routing Rules engine is used to automate the distribution of claims to different teams Routing is skill based and takes care of leave plan/availability of claim handlers.	Routing rules engine is AI enabled which can predict the claim journey and decide whether the claim workflow to be manual or machine driven. Chat & voice bots communicate with Routing rules and decide the type of claim journey(manual or machine driven) during FNOL process itself.
	Claim evidence capture/verification	Claim evidence verification is manual	Claim evidence verification is manual	Claim evidence verification is manual	Image recognition techniques are used for validating the evidence and assessing the damage which eases the job of the claim handler.
	3rd party inclusion into system	Task allocation to 3rd party partner happens over phone calls/emails	Claim handler enters the work(evidence/document /invoice) done by 3rd party into BPM system	3rd party partners can use BPM system to upload the document/evidence/invoice and complete their task.	3rd party resource inventory/availability is integrated to BPM system so that BPM system can use it to automate booking appointments
	Invoice verification	3rd party invoice verification is manual	3rd party invoice verification is manual	3rd party invoice format is standardized, and the application can read the contents of the invoice and displayed for claim handler's decision.	Chat bot available for Claim initiation/ FNOL process.

Maturity Levels

Dimension	Category	Ad-hoc	Standardized	Integrated	Optimized
Process maturity	Fraud detection	Fraud detection is manual	Fraud detection is manual	BPM System can detect fraud based on the predefined events.	AI is used in fraud detection based on rule-based algorithms which use certain features/parameters of the Claim. They analyze the previous claim patterns and keep learning with every manual classification of a claim as fraud
	Approval levels	Claim Approval levels are decided manually	Static Approval levels are defined within BPM system	Routing rule engine decides the approval levels. It is table driven and business can change it on day-to-day basis.	Claims are auto approved for certain products up to certain claim value
Support for new business models	Usage of IoT	-	-	-	IoT can help companies to devise personalized pricing models based on individual risk profile. (For example, there are Mobile apps/watches which measure various health parameters of a person. These can work as input for a more accurate quote for Life/Health insurance which can minimize the company's risk. Enterprises need to align with these companies to fetch the required data feed gathered through various IoT devices.
	Ecosystem with content/data sharing	-	-	-	Enterprises can collaborate with other partners to promote their products and complement each other. For example, enterprises can build a common portal where they have recommendations for real estate consultants, health care professionals, automobiles, insurance products etc. Also, they can bundle products like home loan which is covered with Insurance.
	Advance Analytics	-	-	-	Predictive analytics can be used on the claims data to estimate the future volumes on day-to-day basis and work on de-risking strategies. This can act as one of the inputs for marketing and sales teams to devise their products and marketing campaigns.



Conclusion

Enterprises should clearly understand where they stand in terms of their maturity levels and set a clear vision of what they need to achieve. IT should align itself with business leaders to identify features that will enable them to achieve organizational goals. Each feature implementation not just involves IT costs, but also a lot of hidden charges in terms of - restructuring the organization, changing processes and training workforce, and aligning third parties to new processes. Just to enable the customer to see the live status of a claim requires lot of changes in their existing setup and architecture. Organizations should align with a better IT partner who can help them in identifying what they want to achieve and provide the required expertise for implementation. If you would like to assess your company's process maturity level, please contact us, so we can help you in this process.



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Bio: Satya is a seasoned professional in Enterprise Application Integration and Business Process Management. He has 16 years of experience in designing solutions for customers in Insurance, Telecom, and healthcare domains.

About Mindtree

Mindtree [NSE: MINDTREE] is a global technology consulting and services company that enables enterprises across industries to drive superior competitive advantage, customer experiences and business outcomes by harnessing digital and cloud technologies. A digital transformation partner to more than 260 of the world's most pioneering enterprises, Mindtree brings extensive domain, technology and consulting expertise to help reimagine business models, accelerate innovation and maximize growth. As a socially and environmentally responsible business, Mindtree is focused on growth as well as sustainability in building long-term stakeholder value. Powered by more than 29,700 talented and entrepreneurial professionals across 24 countries, Mindtree — a Larsen & Toubro Group company — is consistently recognized among the best places to work.

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