Insurance Quoting Process

EVALUATING THE ROI OF POLICY REVIEW AUTOMATION

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According to McKinsey, 25% of the insurance industry will be automated by 2025 through the implementation of artificial intelligence to overcome bottlenecks and reduce manual processes. These automation efforts could drive cost savings of $390 billion by 2030, according to a report by Autonomous NEXT. Leveraging intelligent document processing (IDP) and robotic process automation (RPA) is becoming essential for insurance companies in order to keep their competitive edge.

Automation holds the promise to solve the challenge of handling labor-intensive paper work which is still at the core of many insurance operations. The quoting process is one of these paperwork-intensive areas. To prepare new quotes, group insurance underwriting teams are typically tasked with reviewing and extracting key information from prior carrier plans and submissions in addition to comparing locally issued policies against their company-issued counterparts. Over the course of a year, the process can involve thousands of documents and is onerous work. Teams of quote specialists can spend fully one-third of their time simply comparing policies and looking for differences in provisions. This is why more and more insurance companies are turning to IDP-driven automation in order to reduce the time it takes to review and compare these documents while increasing the accuracy of data extraction.

By implementing automation solutions, insurance companies are able to reduce quote generation time from days to hours. But how do these efficiency improvements translate to Return on Investment (ROI) for an insurance company? Is it possible to calculate the hard ROI of automation? And how do you estimate the value of the soft benefits that automated policy review brings? This white paper is designed to help buyers from the insurance industry evaluate the ROI of automation solutions before making their final decision.

WHY AUTOMATE THE POLICY REVIEW PROCESS?

The overall purpose of automating the process of extracting and analyzing essential information from insurance policies, benefits booklets and prior carrier plans, is to increase the operational efficiency of an insurance company or broker that process a large volume of documents on a daily basis.

A well-chosen solution will have an immediate benefit: it will reduce the time it takes highly skilled, expensive quote specialists to screen plans, while delivering more accurate results. With plans being analyzed more quickly and accurately, the organization spends less money on the review process: this is the hard-dollar impact of policy review automation.

But the many side benefits should not be overlooked. Policy review automation greatly contributes to shortening the sales cycle, because the sales teams get much quicker the key information needed to create accurate quotes. New customers are more likely to accept an offer they receive quickly, and customer satisfaction and re-engagement are in direct correlation with the responsiveness of a company; improved quote accuracy generated by automation enables the insurance carrier to price policies more competitively, and consequently close more deals; quote specialists spend more time on strategic tasks rather than sifting through huge piles of documents; and the upper management gets quicker and better insights about key policy parameters that can heavily impact the business.

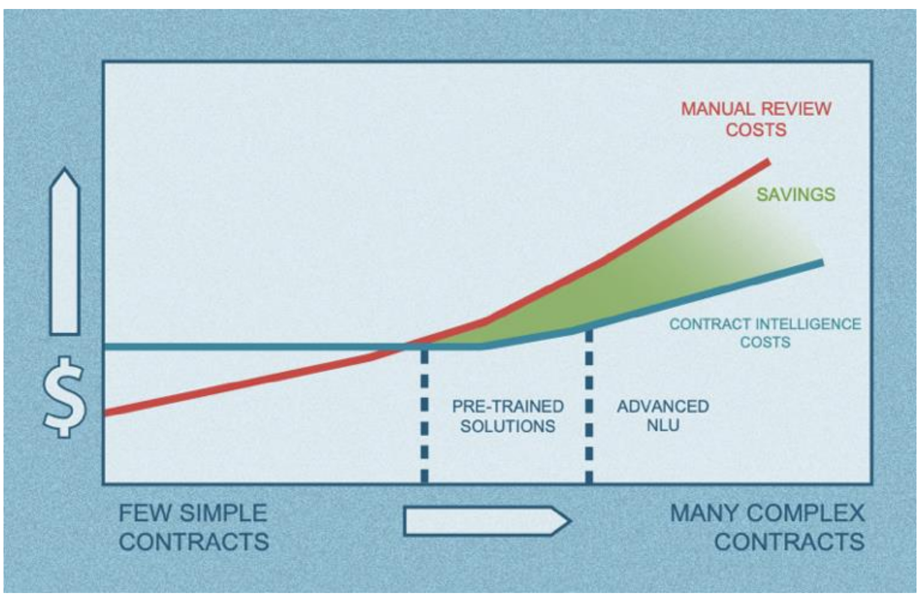
Tools to automate policy review can be bought as a stand-alone product (like Cortical.io Contract Intelligence) or as part of a Robotic Process Automation (RPA) system. Having a checklist of the top criteria to look at when selecting a solution is a good idea. Once you have identified a solution that meets your criteria, you should ask about the Return on Investment (ROI). This white paper presents an approach to evaluate it.

EVALUATING THE ROI OF POLICY REVIEW AUTOMATION

Since the main goals of policy review automation are to improve the operational efficiency and shorten the sales cycle, can its impact on an enterprise margins be calculated? Is there a way to estimate the money saved with more efficient processes and more accurate quotes? This is an essential question to ask your vendor, all the more as determining an appropriate ROI for the investment will help ensure key stakeholder sign-off.

One needs to distinguish between the hard ROI – how much money will the organization save by automating the policy review process? – and the soft ROI – can it help indirectly improve margins? What are the qualitative benefits of policy review automation, for example better pricing strategy, better resources allocation, improved knowledge transfer, and more?

The number of documents that must be processed, their average size, as well as the number and type of extractions and inferences have a big impact on the ROI of automation solutions. But as each organization has different parameters and vendors have different pricing models, there is no rule of thumb to calculate a generic ROI. This has to be calculated case by case.



Some companies have simple requirements, such as having to review a small number of standard policies. Other companies only deal with plans they write (as opposed to reviewing plans from competitors using different structure and terminology). These organizations will get good results with standardized, pre-trained tools that are cheaper than more advanced solutions, on the other hand the amount of hours they can save is rather small.

Other organizations have to navigate through a wide range of different document types from third parties, with hundreds of pages each and challenging provisions to interpret. For example, an insurance company requires the system to correctly interpret the sentence "Insured employees are not required to contribute to the cost of the Long-Term Disability coverage” and classify it as "100% employer paid". This requires implementing a system with advanced natural language understanding capacities, which is more expensive than basic keyword-based review software, but since the savings at stake are much greater, the financial benefit of automation could be higher than in the previous example.

Can this impact be quantified?

One model for evaluating the ROI of a business process improvement is to determine the cost of the current process and calculate the potential direct savings and attempt to quantify, if possible, the indirect benefits. The ROI of policy review automation on an annual basis can then be calculated with the following formula:

$$\frac{Direct\ Savings + Indirect\ Benefits}{Cost\ of\ \ Automation}$$

Direct Savings

To calculate the costs of your current policy review process, you need first to answer these 3 questions:

1. How many documents are reviewed on an annual basis?
2. On average, how much time does your quote specialist spend reviewing a document?
3. What is the average hourly cost of a quote specialist?

The average time for processing a document depends on the size of the document, but also on the number and difficulty of extractions. You may want to create several categories of policies, depending on the difficulty of reviewing them, and calculate the ROI for the different policy categories.

Take an insurance company that processes 50,000 Tier 1 policies per year – Tier 1 policies being the easiest documents to review. Each Tier 1 policy requires on average 15 minutes of manual work by a quote specialist whose fully loaded hourly rate is \$50. That brings the yearly costs of manually processing these documents to:

$$50{,}000\ \ documents\ x\ 0.25\ hours\ x\ \$50/hr\ \ =\ \ \$625{,}000\ in\ annual\ costs$$

Depending on the use case, customers typically save between 30% and 60% of the time required to review and analyze documents. In the above example, that means that the direct savings range between:

Lower end (30%):

$$\$625{,}000\ x\ 30\% = \$187{,}500\ in\ annual\ savings$$

Upper end (60%):

$$\$625{,}000\ x\ 60\%\ \ =\ \ \$375{,}000\ in\ annual\ savings$$

In this example, it means that the implementation of an automation solution will enable the company to pull the equivalent of two to four full-time quote specialists out of the policy review process and reassign them to more sophisticated tasks, making better use of their skills.

Indirect Benefits

Indirect benefits are much harder to quantify but should definitely be considered when evaluating the ROI of policy review automation. Here is a short list of the indirect benefits customers usually see:

1) **Reduced company risk**
   Because it is more accurate than manual labor, policy review automation greatly reduces the risk of missing important clauses or misinterpreting provisions. Quote specialists may overlook two to three provisions for a given number of plans. Each overlooked provision has a cost associated with it (higher risk for the company, negative impact on profitability, etc.).

2) **Shorter sales cycle**
   Because automation accelerates the policy review process, quote specialists can process the quotes quicker. An insurance company will be able to submit quotes much faster and consequently close more deals. Note that the faster response time enabled by automation also positively impacts customer satisfaction.

3) **Improved pricing strategy**
   Accrued accuracy indirectly affects the bottom line because it enables a better pricing strategy. Human accuracy is generally estimated at around 80%, while a good review automation tool reaches about 90% accuracy. For an insurance company, this translates in more accurate quotes and therefore either better margins or more competitive quotes, resulting in a higher probability to close a deal.

4) **Easier knowledge transfer**

When employees move up the ranks, leave or retire, a document review solution with trained models helps transfer knowledge about extractions and how to interpret them to new employees.

How can these indirect benefits be quantified?

According to Nucleus Research, quantifying indirect returns requires a structured approach and educated assumptions, testing the validity of estimates against a sample population and projecting a best-case and a worst-case scenario. Based on the case studies the research organization has conducted, Nucleus estimates that, on average, indirect benefits account for half of technology ROI. To be conservative, we will assume that indirect benefits are only 1/3 of total benefits or 50% of direct benefits in our ROI calculation.

Let's return to our example company that processes 50,000 policies every year. In our lower end scenario (30%), the direct savings were estimated at $187.500, while the upper end scenario brought the estimated direct savings to $375,000. Applying Nucleus' assumption to these figures gives us the following estimated indirect benefits on an annual basis:

Lower end (30%):

$$\$187{,}500\ x\ 50\% = \$93{,}750\ in\ annual\ savings$$

Upper end (60%):

$$\$375{,}000\ x\ 50\% = \$187{,}500\ in\ annual\ savings$$

Cost of Policy Review Automation

There are different pricing models for document review solutions, either document- or user based. Infrastructure cost, while minimal, should also be considered. You will also need to take the model training time and cost, which may vary with each solution, into consideration. This is a one-time expense and should be amortized over the life of the project (e.g., three years).

Let's assume the annual subscription for an automated review solution is $230,000 for 50,000 documents per year and requires $20,000 for initial training and consulting (to be amortized over 3 years).

Total annual costs of policy review automation:

$$\$230{,}000 + \frac{\$20{,}000}{3} = \$236{,}667\ \textit{in annual costs}$$

Evaluating the ROI of Policy Review Automation

Justifying the implementation of new solution requires an evaluation of the ROI. With the direct savings, indirect benefits and cost of automation, the ROI of the solution can be estimated based on business process improvement.

Let's go back now to our original ROI formula and integrate all the variables we obtained:

$$\frac{\textit{Direct Savings} + \textit{Indirect Benefits}}{\textit{Cost of Automation}}$$

For our company processing 50,000 policies per year, this means a yearly ROI ranging between:

Lower end (30%):

$$Direct\ Savings = \$187{,}500$$
$$Indirect\ Benefits = \$93{,}750$$
$$Total\ Savings = \$281{,}750$$

$$ROI = \frac{\$281{,}750}{\$236{,}667} = 119\%\ per\ year$$

Upper end (60%):

$$Direct\ Savings = \$375{,}000$$
$$Indirect\ Benefits = \$187{,}500$$
$$Total\ Savings = \$562{,}500$$

$$ROI = \frac{\$562{,}500}{\$236{,}667} = 238\%\ per\ year$$

CONCLUSION

When calculating the ROI of a document automation solution, it is essential to consider both the direct savings induced by automation and the multiple indirect benefits such as increased efficiency and shorter sales cycle. In fact, experts acknowledge that software that improves productivity generates a higher proportion of indirect benefits than supply chain software, for example.

It is also important to be aware that the ROI of a policy review solution greatly depends on the use case and company environment. The type and number of policies that must be analyzed on an annual basis, their level of complexity, but also the labor costs associated with the manual review, the degree of experience of your quote specialist, all that will affect the results.

If you are interested in learning more about how to calculate the ROI of automation for your quote specialists and their policy review process, please contact us at: sales@cortical.io

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