



## **Executive Summary**

An entirely new class of software – Al-powered claims guidance – uses next-generation machine learning and natural language processing to understand complex bodily injury and recovery like a medical expert and guide examiners and adjusters daily to the right actions on the right claims at the right time to maximize impact. The result is a 7-10x ROI that is enabling forward-thinking organizations to change the underlying economics of claims handling for the first time.

#### ROI directly attributable to the software for a top Disability carrier includes

- 4x increase in its Short-Term Disability (STD) fast track claims pipeline
- 95% accuracy in precisely assigning claims to the fast track workflow
- 43% drop in bridging from STD to Long-Term Disability (LTD)
- 16% drop in LTD rejection
- 21% increase in RTW resolutions
- 4x increase in closed claims in mature and stable blocks
- 85% of referrals being accepted by senior examiners for recertification investigation
- 58% increase in resolutions for employees in the "any occupation" vocational category
- 18% drop in unnecessary "long notes" on claims

- 17% drop in overall touch points on claims
- 9% increase in critically needed deep dive investigations of more complex claims
- 33% faster payments of LTD bridged claims
- 900 examiner hours per month saved due to fewer notes per claim
- 30% of referrals to more expert examiners resolved in
   3 to 5 months vs just 5% prior
- Overall STD to LTD incidence falling from 4.9% to 2.8%
- Low-touch claim handling jumping from 38% to 70% of claims
- Reserve allocations reduced by 8-figures in the first year
- Average reserve takedown per claim greater than \$100,000

#### **ROI at a top Property & Casualty carrier includes**

- 73.5% increase in attention being directed to at-risk claims within the first week
- 24.6% increase in attention to at-risk claims at this carrier within the first month
- 30% of claims flagged as severe having their trajectory placed on a more optimal path
- 85% accuracy in predicting attorney involvement

## **Evolution**|Q

# The Insurance Industry's Advanced Technology Opportunity

Since 2019 advancements in artificial intelligence have accelerated dramatically, leading to the development of new technologies specifically designed for the insurance industry – one of the largest, most data-rich sectors still underserved by advanced tech.

The cost of claims is typically 80 percent of premiums — and in 2021 U.S. insurers alone collected \$1.4 trillion in premiums. That makes improving claims handling the biggest opportunity and the most valuable financial and operational lever to lower costs for carriers and third party administrators (TPAs). Although earlier technology solutions from robotic process automation to auto-adjudication have generated efficiencies, they have not materially impacted the cost of claims.

However, an entirely new class of software – AI-powered claims guidance – uses next-generation machine learning and natural language processing to understand complex bodily injury and recovery like a medical expert and guide examiners and adjusters daily to the right actions on the right claims at the right time to maximize impact. Delivering a 7-10x ROI, the software is enabling forward-thinking organizations to change the underlying economics of claims handling for the first time.

The benefits are substantial: reduced claim durations; reduced claim handling expenses; reduced adverse events; faster return-to-work (RTW) journeys for injured or sick employees; better identification of modified occupation

opportunities or alternate occupations for these employees; more accurate predictions of claim severity, litigation likelihood, and claim trajectory; more efficient referrals to clinical and vocational experts; reduced adjuster and examiner attrition; faster upskilling of more junior examiners and adjusters; and the ability to expand claim capacity without adding resources.

Because the financial impact is at scale – and delivers both immediate and long term ROI – claims guidance software is now the most important investment insurance executives will make this decade in Group and Individual Disability, Property & Casualty, and Workers' Compensation lines.

Delivering a 7-10x ROI, the claims guidance software is enabling forward-thinking organizations to change the underlying economics of claims handling for the first time.





## Immense Challenges in the Current Claims Processing Model are Costly

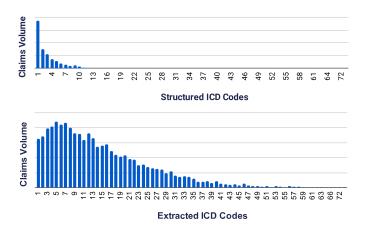
While each claim possesses unique characteristics, there are nevertheless systemic factors common to entire claims blocks that, unless addressed early and strategically, lead to avoidable losses. That's why transforming the current industry standard methodology for claim reviews can have an outsized effect on outcomes across the board. Al-powered claims guidance does this by solving three critical challenges common across the insurance industry: an obsolete calendar-based review process, a severe 'big data' problem, and the growing caseload that each examiner or adjuster must handle.

The first challenge, the diary-based review methodology, has examiners and adjusters review claims based on set calendar intervals, such as 60, 90, or 180 days. Even though it's the industry-standard methodology, many carriers do understand its flaws and limitations – and widely see it as a stop-gap measure to ensure that, at the very least, a claim does not fall through the cracks by being 'missed' or accidentally forgotten. However, this defensive, stop-gap approach to claims has severe disadvantages and creates a snowball effect of negative outcomes throughout claims organizations because it causes examiners and adjusters to be too early – or too late – in taking action on a claim. For even the most technologically advanced carriers and TPAs, there is no choice but to accept the drawbacks until a viable replacement surfaces.

The second challenge – the industry's big data problem – makes the work of examiners and adjusters especially hard. At its core, their job is to allocate their time between processing claim updates, critical thinking, performing due diligence on the claim throughout its trajectory, and referring claims for special resources when appropriate. However, even the most experienced examiners and adjusters have difficulty identifying claims ready for immediate action due to complex case data and lack of real-time case views when new data hits the system. A key challenge is that the data contains both structured medical data (found in a properly labeled place in a core claims system or spreadsheet) as well as difficult to parse unstructured bodily injury and medical recovery data (the extensive, conversational medical and legal notes in each claim).

For example, there are more than 120,000 medical ICD codes and CPT codes¹. On average in each claim there are 2.5 medical codes that are in structured formats – but there are on average 14.5 codes relevant to the claim that lie hidden in unstructured, conversational notes formats that can run pages in length. These hidden medical references in lengthy notes on diagnosis are especially important because examiners and adjusters must make decisions about which overlapping medical conditions – some of which may stretch back years – are relevant to the current case and which are not. The volume and complexity, taken together, are often too much for humans to process in real time.

#### **Unmatched Ability to Read Unstructured Data**



On average there are 14.5 extracted ICD codes per claim vs 2.5 ICD codes in structured data

<sup>&</sup>lt;sup>1</sup> ICD codes are diagnostic. CPT codes describe treatment.

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This is further compounded by **the third challenge:** high caseload numbers per examiner and adjuster, with a single examiner or adjuster sometimes having 100 or more claims assigned to them. A single claim can stretch dozens of pages in length and often contains complex psychosocial and behavioral factors in addition to medical comorbidities that must be understood and factored into claims decisions. These claims get updated with new information at arbitrary intervals – such as medical reviews, legal updates, if surgery is scheduled and what the outcome is once completed, and other variables. Yet each new piece of data may signal a dramatic change in the potential losses from the claim. It then becomes increasingly difficult for an examiner or adjuster to both quickly understand what's really going on in a claim, what is likely to happen in its trajectory, and where to intervene to keep the claim on track. These lack of real-time views cause most claims to be handled without a clear understanding of recovery and duration expectations. Importantly, the industry's current duration measurement tools are decades old and rely on severely outdated and limiting technologies. Unable to parse the full nuance and complexity of a claim, these tools instead often rely only on surface facts such as age and primary diagnosis.

Claims in particular are extremely difficult to effectively manage if key actions are not taken very early in the process to identify potential legal actions, unrelated medical expenses, and when return to work can begin. Employers are eager to get injured workers back – as are employees themselves – but workers are often staying out of work longer than medically necessary, or even permanently, when other courses of action taken earlier in a claim cycle might have changed the case trajectories.

The challenges start at First Notice of Loss (FNOL) with the triage process, in which a claims professional can make decisions that can send a claim down the wrong road – and once a claim is off track it is extremely difficult to reorient it toward a more optimal trajectory. This often results because the human brain is simply not capable of processing all of the data that is pouring into each claim, let alone when the issue is multiplied by the large number of claims each examiner or adjuster must manage simultaneously.



As a result, Return-to-Work (RTW) is often happening much later than should be when compared to what is medically possible; complex claims languish, leading to litigation; referral resources are not used early enough and on the right claims; examiners and adjusters are forced to be reactive due to claim volume and complexity and subsequently do not start early communication about RTW; inaccurate or delayed referrals are made to equally overwhelmed vocational and clinical nurse teams; and examiners and adjusters – given data complexity and volumes – are not utilizing all of the relevant information in a claim.

The lack of real-time visibility, combined with the diary-based review method, leads to the severity of claims being misinterpreted — and to claims not being assigned to examiners and adjusters with the appropriate expertise early in the cycle. This in turn leads to adverse developments and constant recalculations of claim needs as new information arrives.

The software delivers 95% accuracy in precisely assigning claims at First Notice of Loss.



## Modernizing Claims Processing Delivers Multiple Material Benefits for Insurers and TPAs

Using Disability Insurance as an example – both Short Term (STD) and Long Term (LTD) – the ROI that results from modernizing the underlying claims processing methodology is substantial, measurable, and immediate. The reason it is the most valuable financial lever for insurers and TPAs today is because claims is the last frontier in the insurance industry that has not successfully changed as new technology has developed.

As a result, when change at scale is applied, the delta on major industry KPIs isn't incremental – it's dramatic. Importantly, the improvements are not just at initial deployment of the platform. Due to the nature of advanced machine learning, the software learns as it examines ever growing volumes of claims – while at the same time examiners and adjusters further hone how they partner with the platform. This causes the benefits to be ongoing over the long term as the benefits of AI-powered claims guidance are applied to each new claim with efficiencies learned in one claim cascading to the next.

#### The technology works via three primary levers

- Claims Summarization, which combines the latest data, historical data, and relevant third-party data to find patterns and context.
- Claims Guidance, which delivers continuous, predictive action recommendations on parameters such as case severity; duration; and opportunities for RTW, advance pay, close eligibility, and clinical and vocational referrals.
- Business Alignment: Tools that allow the carrier to tailor action guidance based on their specific case resolution goals, resource allocation and staffing models, and weight placed on RTW, claims cycle durations, settlements, or other metrics.

The technology is powered by artificial intelligence. In general, across any industry, AI is the ability for computers to think like a human and perform tasks in real-world environments on their own. Machine Learning is an advanced branch of AI that mimics human reasoning by using a neural network – which is a series of algorithms modeled after the human brain – to identify patterns, make decisions, and improve themselves through experience.

The machine learning in claims guidance software finds historical patterns and understands not only context, but cause and effect. Importantly, the system delivers an unmatched ability to read unstructured data – such as a medical professional's extensive notes on a claim, an examiner's notes taken while talking to experts or the claimant, legal notes, and other information that is in note form. As a result, it distills massive data sets in real time to understand recovery like a medical expert, predict outcomes with 95 percent accuracy, make and explain action recommendations to frontline insurance examiners and adjusters, and then repeat the process daily to prioritize the highest-impact claims ready for immediate action.





The precision and accuracy of the claims guidance software eliminates the 'gut feel' approach to claim reviews on which even the most experienced examiners and adjusters must sometimes fall back. Instead, it allows claims handlers to focus on ensuring that treatment is as robust as possible to prevent compounding injuries, that steps are taken to get claimants better faster, and that they can return to work sooner.

The AI partner is an especially important aide to claims teams when they are helping an injured worker understand the complexities of the claims process – which, in turn, lessens the likelihood of litigation. This is because examiners and adjusters that are able to focus their time on the right claim, at the right time, will be able to spend more time in 1-on-1 interactions with the claimant and ensure that the claimant is fully invested in the RTW journey chosen – whether it be a return to the claimant's original job or a stair-step process in which light-duty positions or positions related to the original job are chosen as initial options during the medical recovery process.

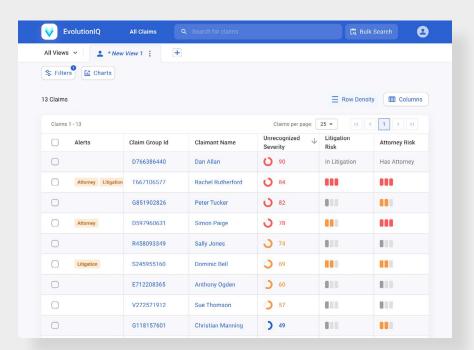
#### How it's delivered

A user-friendly, intuitive dashboard presents a list of the most resolution-ready or attention-needed claims, every morning. When an examiner or adjuster clicks on a claim, the software explains in detail the fact pattern inside the claim, and what outcome to which the claims professional should drive. For example: an injured worker is not injured any more, here are the medical facts to support it, and here's why it's ready for resolution or settlement. Another example is the software spotting a sequence of data points that suggest treatments have been rendered that are unrelated to the injury, unnecessary, or excessive. Armed with early alerts, the examiner or adjuster takes action to continue steering the claim back on track and eventually resolving it. Each alert represents a potential resolution opportunity. Of course, the software supports many other types of guidance scenarios, too.

The guidance delivers early alerts and recommendations that steer a claim that is off track – or has the potential to move off track – back to resolution or a potential resolution opportunity. For example, the software may recommend that a particular claim is well-suited for modified RTW, that the claimant is nearing medical recovery, that maximum improvement has been reached, or that there is an optimal RTW resolution path available based on the way in which similar past claims have been resolved.

Triage software accurately divides claims into segments, reducing time spent on claims with predetermined outcomes and instead re-focusing examiner and adjuster attention on complex claims. The result is that expert attention is now focused on impactable claims each day with specific guidance to assist workflows.

When an examiner or adjuster clicks on a claim, the software explains in detail the fact pattern inside the claim, and what outcome to which the claims professional should drive.





## Measurable ROI Across the Entire Claims Organization

The largest ROI can be seen in lower claim costs driven by targeted use of claim handling resources. These costs are primarily incurred by unnecessarily high claim durations, which correspondingly increase indemnity costs, and inefficient allocations of discretionary claim handling expenses.

In Short Term Disability (STD), duration, in the simplest of terms, is how fast an injured or sick claimant can return to work. The shorter the duration, the better the experience is for the employee, their employer, and for the carrier or TPA. Conversely, the longer a claim is active and not resolved, the higher the likelihood of adverse events, such as medical delays or complications, that will create negative outcomes for the injured or sick claimant and increase carrier costs. Efficiently managing duration also frees examiners and adjusters to focus their attention on more complex – and potentially more costly – claims.

Claim handling expenses can be understood as all of the costs, big and small, that are incurred in order to get an injured claimant back to work as soon as possible. Carriers and TPAs must not only manage these expenses but must constantly ask, 'what are the right level of expenses' to ensure efficient, compassionate, and fair RTW? Certainly, there are basic costs that are applicable to all claims such as those associated with staffing, managing the standard steps in a claim journey, investigating when necessary, and processing a claim through resolution. But there are also variable costs, such as claim interventions, pulling in costly vocational or clinical experts, or other activities unique to a particular claim, that while discretionary, will nevertheless serve the claimant well and speed RTW.

A critically important lever in managing claim durations and expenses is accurate triage at FNOL. A top disability carrier using Al-powered claims guidance software in its STD block of claims saw a **4x increase** in its fast track claims pipeline, which means that because an examiner was placed on the right claim at the right time extremely early in the cycle, the claim was correctly triaged and now moves along its trajectory smoothly and rapidly.

This stable and fast trajectory is fueled by the software's high accuracy in predicting outcomes based on its understanding of the nuance of the particular claim combined with its institutional knowledge of similar claims. The software at this carrier has 95% accuracy in precisely assigning claims to the fast track workflow. For all claims, not just those triaged to be in the fast track pipeline, the carrier resolved **30% of referrals to more expert examiners in 3 to 5 months vs just 5% prior** to the system being deployed.

In Disability, shorter durations are also important when considering RTW, which has a high likelihood for claimants in STD vs those who transition or bridge to LTD. For the top disability carrier, the software dramatically reduced bridging from STD to LTD by 43%. This means that the AI co-pilot correctly guided examiners to keep claims in the Short Term block that were best suited to it, rather than refer medically complex claims to the Long Term block unnecessarily, as had often been done in the past due to either an examiner not having the tools needed to navigate medical complexity - or because the diary-based review method resulted in the claim 'timing out' and transferring to LTD simply because the duration for STD status had expired. Likewise, due to better STD management via the software, LTD rejection – when an LTD examiner bounces the claim back because the claimant does not meet LTD criteria - dropped by 16%. Overall, the software decreased LTD incidence from 4.9% of claims moving to LTD to now just 2.8% at this carrier.

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The software directly enabled a **21% increase** in RTW resolutions at the disability carrier. This is because predictive models forecast the general duration and complexity of a claim from submission data – such as the diagnosis and demographic data – generated at First Notice of Loss. From there, the claims guidance software isolates those claims in a large open block that have resolution potential. This allows claims organizations to direct increased claim handling resources to claims where they can have the highest impact.

At a top P&C carrier now using the software, Al-powered claims guidance is having an immediate effect on initial claim triage. The software drove a 73.5% increase in attention being directed to at-risk claims that need adjuster investigation and actions within the first week. It drove a **24.6% increase** in attention to at-risk claims at this carrier within the first month. This is critically important as pairing the right claim with the right adjuster will reduce claim costs by 20% – but only if this pairing is made at FNOL, which had not been the case at this carrier prior to deployment. In fact, accurate claims triage results in 80% of the eventual cost being identified at FNOL, which impacts claim trajectories as well as reserve allocations. Based on the P&C client's experience to-date, **30% of claims** flagged as severe by the software are having their claims trajectory altered and placed on a more optimal path – such as a lower cost path, RTW, or faster resolution.

ROI is also delivered by reducing adverse events, such as a claim's medical severity increasing suddenly or the likelihood of litigation increasing or accelerating. For example, in the disability carrier's Long Term block, more efficient claim management drove a **4x increase in closed claims** in mature and stable blocks. At the same time, **85% of referrals were accepted** by senior examiners for recertification investigation, which underscores their confidence in the software's recommendations for LTD transition. The software enabled a **58% increase in resolutions** for employees in the "any occupation" vocational category, which is when an employee does not return to work in the original job but does find associated work.

A key issue in the industry is the large number of claims that are incorrectly referred to clinical and vocational experts. This is often due to an examiner or adjuster not being able to process all of the data inputs in real time to make the correct assessment of bodily injury or medical recovery. So, they refer these cases to clinical teams who have more expertise. However, vocational and clinical nursing staff typically only accept about 10% of referrals from examiners and adjusters.

These improperly routed claims lengthen the claim cycle when they are rejected from clinical and vocational teams – and they also increase the likelihood of adverse events, such as increasing medical severity due to medical delays, or litigation due to frustrated claimants who do not understand the delays.

At the top P&C insurer that is deploying the system, the software is **accurately predicting 85% of attorney involvement.** In year 1, there is a projected **1.75% reduction** in claim costs due to a **10% reduction** in litigated claims. In year 2, that is projected to grow to a **3.5% reduction** in claim cost due to a **20% reduction** in litigated claims.

The software further delivers ROI via reduced adjuster and examiner attrition. There is an immediate reduction in burnout among examiners and adjusters using the AI co-pilot, which in turn, reduces attrition. This is especially important to carriers and TPAs which are already suffering from the 'great resignation' and fighting a war for talent as more experienced claims handlers approach retirement age.

# The software directly enabled a 21% increase in Return-to-Work

For example, at the disability carrier the software **reduced** the amount of "long notes" on claims by 18% and reduced touch points on claims by 17% – both of which underscore that examiners are now much more productive with their time and instead use their expertise only on those claims that need it. This is because the software both guides claims handlers to the claims that need action while simultaneously guiding them away from those that don't. Correspondingly, the software increased low-touch claim handling, which leapt from 38% of claims having 'low-touch' to 70% of claims. Put simply, this means that claims that are progressing smoothly without the need for extra examiner attention continue to progress until such time that the software flags the claim for human intervention.



At the same time, the software drove a **9% increase** in deep dive investigations of more complex claims – again, underscoring that more complex claims that warrant extra examiner expertise are correctly getting it. The disability carrier also reports increased claimant satisfaction due to **LTD bridged claims being paid 33% faster** than before the system was deployed. As examiners are in the business of helping people, knowing that they are helping injured or sick workers receive payments rightfully due them on an expedited basis is another way in which examiner work satisfaction is increased, which in turn decreases attrition and burnout.

The system delivers ROI in terms of staffing via the rapid upskilling of junior examiners. This is because the software is able to deliver action recommendations and claim summaries informed by tens of thousands of historical claims. Importantly, the software's machine learning understands cause and effect and constantly 'learns' as its experience with a carrier's unique data set evolves. It also acts as a claims radar system to ensure that no action is missed on a claim, no matter how many claims the examiner or adjuster is managing. This is especially important for more junior team members because the software ensures that even on their busiest, most difficult days, they will not lose sight of any critical claim - either due to volume or due to case complexity. Finally, the software allows carriers to expand claim capacity without adding staff. For example, the disability carrier saved approximately 900 examiner hours per month due to fewer notes per claim. Those 900 monthly hours can then be reallocated for more investigative work on complex claims, and/or allow carriers to expand the number of claims in their blocks by 10% to 20%, based on the experience of carriers currently using the software.

Finally, AI-powered claims guidance delivers ROI via improved organizational decision making and business alignment. For example, the real-time line-of-sight across large claims blocks delivered by the software now allows insurance executives to better align their claims goals with their business goals. Executives can now calibrate the system so that it targets specific resolution goals, settlement goals, claimant satisfaction criteria, the carrier's resource allocation and staffing models, and more – essentially weighting the system's action recommendations based on the metrics they value the most. This not only helps make the entire claims process strategic, but it allows claims executives to impact the organization as a whole. Furthermore, reporting metrics delivered by the software enable claims executives to report measurable financial benefits and critical KPIs to their senior leadership teams on a regular basis, thereby visibly demonstrating the claims organization's contributions to the carrier's overall targets for claimant and client satisfaction, profitability, and productivity.

Taken together, all of these improvements in claim handling across the board result in reserve allocations being reduced. Better claims handling, in essence, produces lower claims costs, which in turn, produces lower reserve amounts. This directly releases 'cash from the cage' from reserve allocations and contributes to a carrier's bottom line. The top disability carrier using Al-powered claims guidance was able to **slash** its reserve allocations by 8-figures in its first year of using the software – with the average reserve takedown per claim in 6-figures – all directly driven by the impact of the software.

The reverberation of impact can also be felt in the C-suite, such as in a lower cost of reinsurance. Global reinsurance giant Munich Re entered into a strategic partnership with Al-powered claims guidance leader EvolutionIQ to encourage the companies it reinsures to adopt the software. In the news announcement, Munich Re's claims leader for the US market explained that the technology "offers our industry a significant opportunity to control claim costs while delivering enhanced claimant satisfaction. Through this partnership, we have the opportunity to help our clients and their customers save money and reduce costs."

## ROI directly attributable to the software for a top disability carrier

43% Drop in Bridging from STD to LTD

**58% Increase** in "Any Occupation" Resolutions

33% Faster Payment of LTD Bridged Claims

900 Examiner Hours Saved per Month Due to Fewer Notes per Claim

18% Drop
in Unnecessary "Long Notes" on Claims



# Conclusion: A Once-in-a-Generation Shift in Insurance Methodology

Because AI has evolved so rapidly, it is poised to power a once-in-a-generation transformation of insurance claims methodologies. As Accenture notes in its August 2022 report, Why AI in Insurance Claims and Underwriting? "AI is not the same as it was even five years ago. The economics have substantially improved, and the technology has matured significantly.... While many insurers surveyed say that AI is a top priority for them, less than half say their organizations are advanced with these technologies. When you add it altogether, the picture is clear, the window is now to gain a competitive advantage through AI adoption."

#### The report notes:

- "With today's rapidly maturing technologies and the ability to tap into ever-increasing data, AI has emerged as the transformative technology and critical differentiator in the insurance industry, especially when applied in tandem with humans."
- "As AI matures, insurers can leverage the technology... in both process efficiency and decision effectiveness." With access to "an underutilized asset in the massive volumes of structured and unstructured data they collect," "forward-thinking insurers can leverage their data to drive faster and more personalized customer experiences, increasing satisfaction with claimants and generating significant efficiencies..."
- Additionally, because "the insurance workforce is aging and replacing those employees as they exit the workforce will not be an easy task," the report notes that AI will be an essential tool in rapidly upskilling junior claims adjusters and better utilizing the time of more experienced adjusters.

By leveraging claims guidance software to better identify claims most appropriate for intervention, forward-thinking carriers and TPAs are able to leap far ahead of their peers. Importantly, being early in deploying claims guidance software addresses the hard-to-measure 'cost of inaction' in which a failure to proactively invest in improved technologies – while not significantly noticeable in the short-term regardless of industry or commercial sector – becomes painfully apparent in the long-term.

The evolving digital landscape in the insurance industry presents an unprecedented opportunity. With new data sources – such as ever-increasing claimant data as well as relevant third-party data – and emerging technologies, carriers are accelerating their use of digitally enabled, data-augmented solutions to improve the claimant experience and the RTW journey. Digital innovations are reshaping how carriers and TPAs think about claims handling to achieve better business outcomes. As such, Al-powered claims guidance will soon become the industry standard across the industry.

## About EvolutionIQ

EvolutionIQ is the market leading claims guidance platform in Group and Individual Disability, Property & Casualty, and Workers' Compensation lines of insurance. Our proprietary Artificial Intelligence uses the entire claim file contents, historical claims, and external data to guide claim handlers to their most productive task across the entire claim block, every day.

To request a demo please email us at sales@evolutioniq.com