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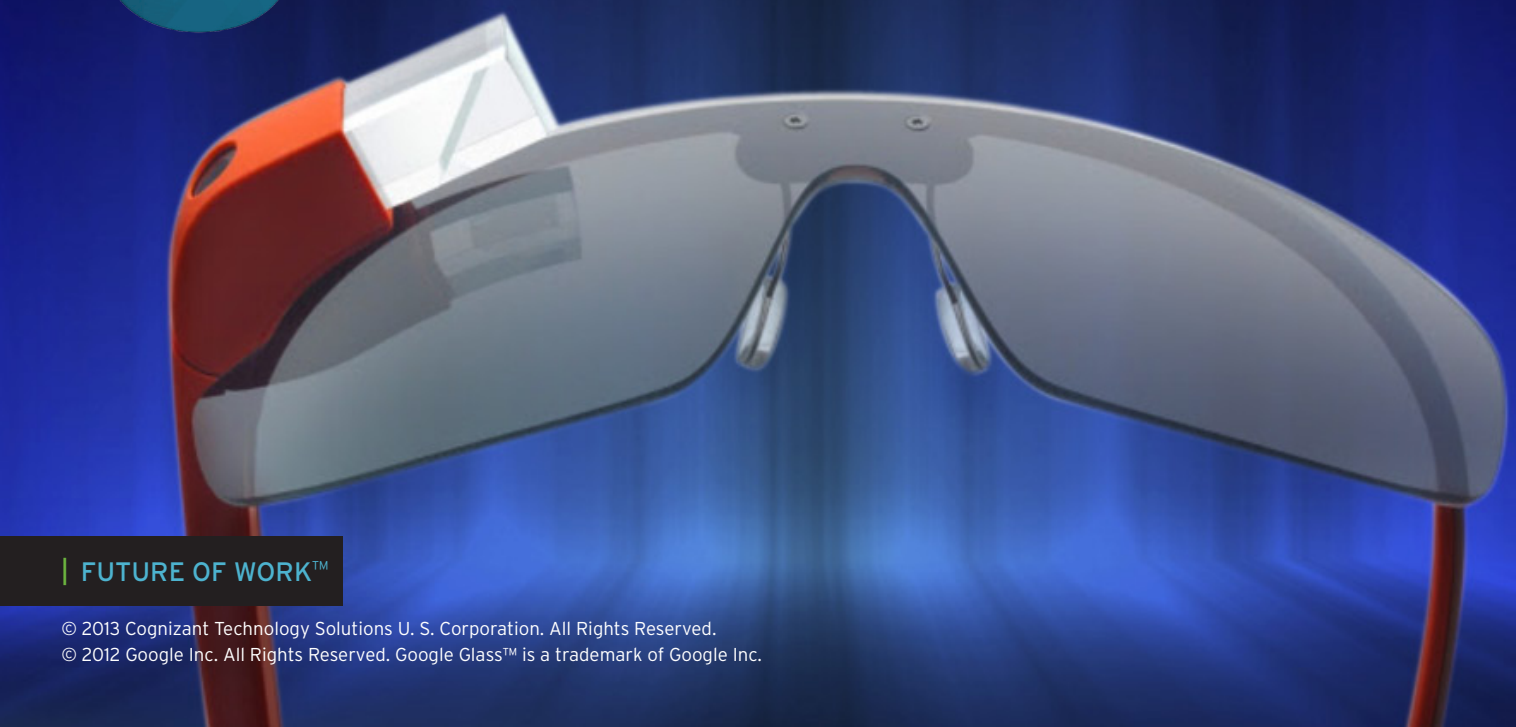
Google Glass: Insurance's Next Killer App

Google Glass could soon transform how insurers work and engage with customers, from claims adjusters and risk engineers connecting in real-time with the home office, to service reps guiding customers through the claims submission process.



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Executive Summary

Google Glass™ — expected to take the stage in early 2014 — could be the next killer app for insurance and other industries. The technology has captured the imagination of a wide audience because it further extends the technology objectives of miniaturization, portability and human integration. Moreover, it leaves people with both hands free while accessing massive computing power, ubiquitous connectivity to anyone on the Internet and the ability to exchange video/audio while going about their daily tasks. Not to mention, the people with whom the Glass wearer is speaking can see objects from the Glass user's point of view. Smartphones and tablets have certainly taken technology to the next level, but with some additional developments beyond its current incarnation, Google Glass could have an even bigger impact.

The natural application of Glass is anytime, anywhere people want to connect and transmit information instantly. It is especially useful in outdoor settings in which people are more likely to continuously move around and require their hands free for important tasks. This is why Glass seems to offer tremendous productivity benefits for insurers. Consider claims field adjusters or property risk engineers, who sometimes need to connect in real-time with the home office or insurance specialists while climbing ladders, inspecting roofs, handling machinery or assessing car damage from difficult angles.

Additionally, insurance customers might want to connect instantly with customer service to get help with a step-by-step video or audio-recording of the incident. Rather than trying to recall the scene of the accident after the fact, consumers could detail the exact spots where the cars involved are damaged.

Another killer app idea is inserting Glass as the front end for a video platform for sharing everyday aggressive driving – truckers speeding, cars swerving, drivers texting, etc. What if there were a platform for insurance companies to easily search, find and witness what drivers experience on the road? The

driver who the insurance company thought was a preferred risk could be the next infamous YouTube star.

In its current form, Glass is not yet fully capable of enabling these services, and industry observers question the impact the device will ultimately have on the market. However, we see technology advances on the horizon that could augment Glass's possibilities for human connectivity and collaboration. For instance, using a virtual keyboard, the Google Glass wearer could transmit textual data by projecting a virtual keyboard on any surface and typing. With remote control, the person with whom the Glass wearer is speaking could manipulate the Glass camera to focus on what is being viewed. These technology capabilities will require some commercial product refinement and evolution, but in our view, they are not far from realization.

In this white paper, we discuss the fast growth of wearable technology, including Google Glass; what it will take for Glass to have real business impact; how several industries are already experimenting with Glass; and four realistic use cases for Glass in the insurance industry.

The New Technology Revolution

Handheld devices might soon become outmoded, considering the pace at which wearable technology is growing.[1] Developments such as the growth in venture capital funding, an increase in the number of startups and patents, an upswing in customer appetite for wearable devices, and the entry of technology heavyweights offering wearable technology (Apple, Google, Samsung and Sony) are just the beginning of a new wave of technology innovation.

Wearable technology is dominating the headlines as a multitude of devices make their debuts (see Figure 1), and an even larger number make their way through the pipeline. Take, for example, the Galaxy Gear™ smartwatch from Samsung, the Nismo™ smartwatch from Nissan, the Nike+ FuelBand™ from Nike, Re-Timer™ from Re-Time, the Power Pocket™ charger from Vodafone and Shine™ from Misfit Wearables (see Figure 1).

Google Glass is an Android-based headset that a user can wear like an ordinary pair of glasses (see sidebar, page 5) and interact with using natural language commands. For instance, the words, "OK Glass" prompt the device to perform a variety of functions that smartphones and tablets typically perform today: making and receiving phone calls, taking and sharing pictures and videos, reading and responding to e-mails, sending messages, performing video chats, receiving driving directions, performing searches, checking and updating social media, browsing the Web, managing a personal schedule, setting up reminders and playing games.

An Explosion of Wearable Devices

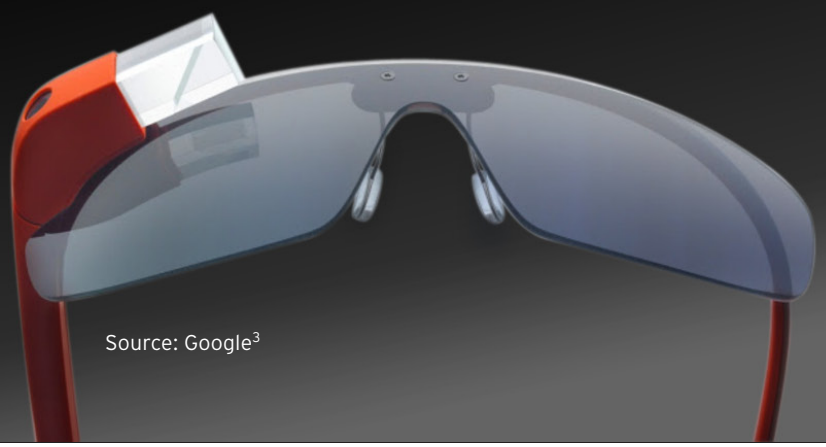
Figure 1

Quick Take

Anatomy of Google Glass

Google Glass features include:[2]

- Voice/data inputs via natural language voice commands or a touchpad on the right side of the device.
- A tiny screen projection in the upper right-hand corner of the user's field of vision, which displays information in a smartphone-like, hands-free format on a 640 x 360 display, which is equivalent to watching a 25-inch screen from eight feet away.
- Voice response relayed using bone conduction through a transducer that sits beside the ear.
- Data connectivity through Wi-Fi or tethering via Bluetooth to an Android device or iPhone.
- 5-megapixel camera, capable of 720p video recording.
- 3-axis gyroscope.
- 3-axis accelerometer.
- 3-axis magnetometer (compass).
- Ambient light sensing and proximity sensor.
- 16 GB or 12 GB storage.



Source: Google[3]

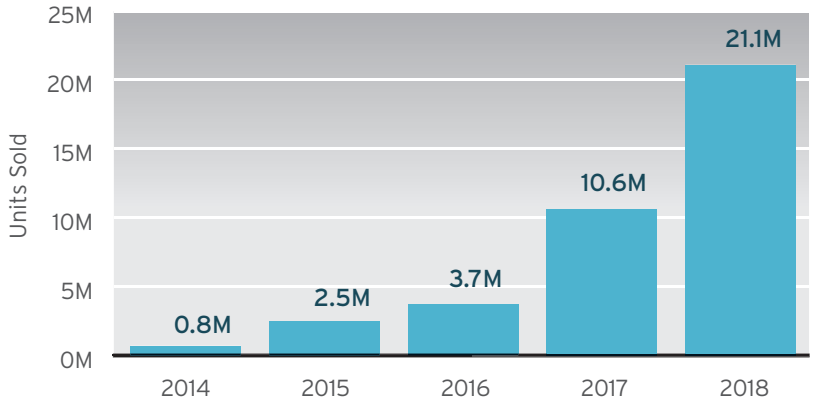
Glass also goes beyond smartphone and tablet functionality. Key differentiators include the following:

- **Capture pictures and videos through the viewer's perspective:** Gone will be the days when the user has to hold a device to take a picture or video and worry about steady hands and precise image capture.
- **Share live views with anyone, under any circumstance:** This can be done even while bungee jumping or taking a roller coaster ride.
- **Free users' hands:** "How to" videos can be viewed or activities recorded while the user performs other actions that require two hands, like climbing a ladder.
- **Use in adverse conditions:** Glass can be used in wet weather conditions, including rain or snow.

Google Glass has already garnered immense media buzz, even before its commercial launch. For instance:

- BI Intelligence forecasts[4] that 21 million units of Glass will be sold by 2018 (see Figure 2). We believe that product design, price and battery life will be the key factors driving user adoption of Glass.
- An April 2013 survey by mobile apps developer BiTE Interactive[5] found that 10% of U.S. adults surveyed who owned smartphones would buy and wear Glass all the time, if the device was priced within their budget.

Annual Sales Forecast for Google Glass



Source: BI Intelligence
Figure 2

- ComScore counted[6] 145 million smartphones in the U.S. as of August 2013; if 10% of these users bought Google Glass, that translates to around 14 million potential Glass users in the U.S. alone.

Although gadget enthusiasts and techies will drive initial usage and sales, Glass's long-term success will depend on the ability of its design to take on a more socially acceptable form. In the BiTE Interactive survey,[7] roughly 45% of survey respondents fear the device will be too socially awkward or too irritating to wear. The social awkwardness factor is in stark contrast to one of the key selling propositions of Glass, which is its trendiness.

Although the marketplace appears excited, skeptics are unsure about Glass's market impact and whether it will begin replacing existing technologies such as smartphones and tablets. In our view, a few changes are needed before Glass can gain significant adoption, including the following:

- A virtual keyboard that allows the user to project a keyboard onto any surface to type.
- Remote control with zoom-in and zoom-out camera functionality, enabling the person with whom the Glass wearer is speaking to adjust the Glass camera.
- A data and voice connection that operates as an independent device.
- Sufficient battery life for video and Web usage.
- A robust ecosystem with a large number of applications (aka "Glassware") for personal and business use.

Cross-Industry Transformation

With the consumer version of Glass set to launch in early 2014, a few industries have started to explore how this new technology can transform their way of doing business. Examples include:

- **Healthcare:** Glass has helped multiple surgeons from across the globe collaborate on complex surgical processes.[8] Philips and Accenture[9] have jointly developed a prototype that allows surgeons to view vital signs on Glass while per-

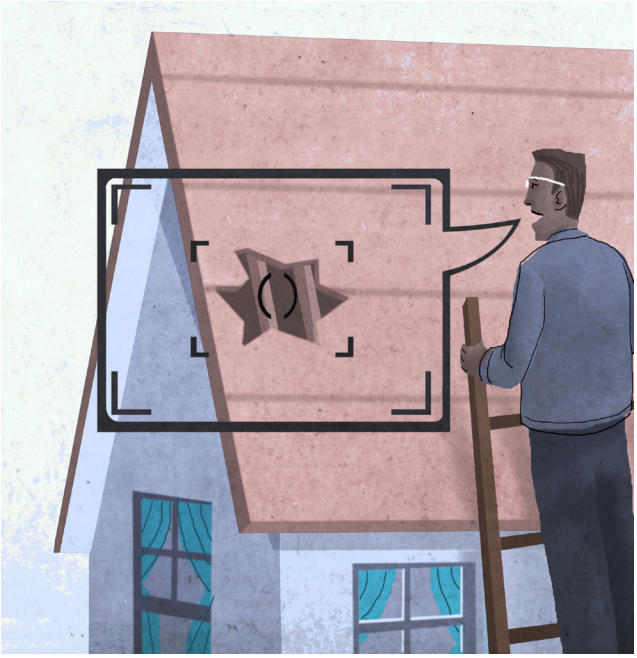
forming surgeries. Farlo, a digital health startup, has developed "aRRTGlass"[10] to assist emergency response teams by providing a live streamed video and vital signs to a doctor or specialist in the hospital while on the way to the emergency room.

- **Banking and financial services:** Banks are exploring the possibilities for Glass to aid customers with paying bills or depositing checks by taking pictures, transferring money, refueling a car (and paying) with voice commands and paying for purchases by scanning QR codes. Fio Bank[11] has a prototype for Glass that can check current balances and list the transaction history for the prior 30 days. Fidelity Investments has developed a Market Monitor[12] app that allows customers to search quotes for major U.S. stock indexes and receive real-time alerts. Several other U.S. banks, such as Wells Fargo and Bank of America,[13] are also experimenting with Glass to develop customer apps.
- **Media:** Several film-makers have used Glass to create short films, such as "The Kiss"[14] by Evan Ferrante and Boonsri Dickinson and "A Cyborg in New York"[15] by Boonsri Dickinson, which provide first-person cinematic perspectives. Google, meanwhile, is[16] providing Glass to students at film schools such as University of Southern California, California Institute of the Arts, Rhode Island School of Design, University of California Los Angeles and the American Film Institute to find its potential for documentary film-making, character development and action-based story telling.

As other industries explore the possibilities of leveraging Glass and building apps for customers and employees, we think the time is right for insurers to consider the first-mover opportunities this technology presents for them and their customers. With the aforementioned upgrades in features and functionality, many possibilities exist, especially in the areas of reducing operational costs through increased productivity, efficiency and effectiveness of field staff (e.g., claims adjusters and risk engineers), as well as improved customer experience. The following use cases describe how Glass could be a game-changer for insurers, both in terms of how they do business and contain costs.

Use Case #1: Improving Productivity and Efficiency of Claims Adjusters

Property and casualty claims adjusters today carry multiple devices for appraising automobiles and homes, including a camera, mobile phone, laptop, mobile hotspot device and GPS. The claims adjuster might use a laptop to check his assignments for the day and map the travel route based on travel distance.



During the appraisal itself, the adjuster speaks with people, takes notes and uses the point-and-shoot camera to record damages. With a handheld camera, it can be difficult to obtain the best angle on each shot, such as from underneath a car or inside an attic. Moreover, the process of recording the information and transferring the photos from the camera to the claims systems is time-consuming and cumbersome. Sometimes, claims adjusters lack the knowledge to make decisions and, hence, engage in conference calls with specialists and try to be their eyes and ears on the ground, albeit with limitations.

Attempts have been made to optimize the claims adjusting process; for instance, some carriers have developed mobile applications and provided tablets to their staffs. This has enabled claims adjusters to reduce the number of devices they carry, for instance, using the tablet to take notes and record photos of damages. However, the small tablet keyboards are a deterrent, resulting in some adjusters reverting to laptops. Neither does this solution help resolve the difficulty of examining damages at awkward angles while simultaneously taking photos and taking notes.

Videoconference calls with specialists have also improved the claims adjustment process, but they still do not provide a first-person view. Adjusters also continue to depend on the GPS for mapping optimal routes.

With Google Glass, adjusters would need to carry only one device. They would be free to take photos and videos using voice commands, and they could provide captions using voice dictation, uploading the photos and videos as they are taken.

With Google Glass, however, adjusters would need to carry only one device. They would be free to take photos and videos using voice commands, and they could provide captions using voice dictation, uploading the photos and videos as they are taken. With access to a full-size virtual keyboard that can be projected onto any surface, claims adjusters could capture detailed notes quickly, even when under a car.

Adjusters would also have easy access to remote specialists, such as special investigation unit staff or total loss specialists, via videoconference calls using Google Hangout sessions. Specialists would get an exact first-person view, aiding faster decision-making. Glass can also act as a smart GPS, providing information on best routes using real-time traffic information.

In all of these ways, Glass could significantly improve the productivity, efficiency and effectiveness of claims adjusters, while reducing costs by consolidating five devices into one.

Use Case #2: Improving Productivity, Efficiency and Throughput of Risk Engineers

Risk engineers carry a similar array of devices to claims adjusters when inspecting properties and conducting risk assessments. During a site inspection, a risk engineer talks to on-site personnel, captures extensive notes on a notepad and takes many photos. It is often difficult to capture the view of a room or inside of a machine with the handheld camera; moreover, the process of recording the information and transferring photos from the camera to the risk survey systems is cumbersome. Like claims adjusters, risk engineers also need to engage in conference calls with specialists.

A few carriers have developed mobile applications for risk engineers and provided tablets, which has eliminated the need to carry a laptop, camera and mobile hotspot device. Risk engineers can take photos of the property using the tablet; however, it is very difficult to capture the information due to keyboard limitations. Also, the tablet does not free the risk engineer's hands when they are occupied with tasks such as climbing scaffolding or looking inside a boiler.

Google Glass eliminates the need for multiple devices. Risk engineers would have a risk assessment checklist and survey guidelines right in front of their eyes, ensuring that nothing is missed. With their hands free, risk engineers could take photos and videos easily using voice commands, whether they are on scaffolds or looking inside a boiler. They can provide captions using voice dictation and upload the photos and videos, instantly. And with access to a full-size virtual keyboard that can be projected onto any surface, they could quickly capture detailed information.

With their hands free, risk engineers could take photos and videos easily using voice commands, whether they are on scaffolds or looking inside a boiler.

Google Glass also enables multiple specialists to participate actively in the survey; with access to a first-person view, they could provide specific instructions to the risk engineer, or they could use the remote control feature to obtain high-quality visuals. This would eliminate the need for multiple site visits and significantly reduce the time needed to prepare risk survey reports, leading to improved quality of reports and underwriting. In this way, Glass could significantly improve the productivity, efficiency and effectiveness of risk engineers and ensure that underwriters have timely access to high-quality risk assessment reports.

Use Case #3: Improving the Claims Submission Experience for Customers

Most insurance customers call the customer service center for help with filing claims. Because most callers have just experienced an accident of some sort, it's the service representative's job to connect with and empathize with them while capturing information. In most auto accidents, photos are not available when the customer service rep is engaged; the first photo is usually taken by the claim adjuster, who tries to create a visual of the accident through interviews, which can be time-consuming and not fully accurate. Hence, the settlement time is longer than desired, often leading to claims leakage and decreased customer satisfaction. Also, in some scenarios, loss payouts can rise due to insufficient loss control measures that could have been taken by customers if they were aware of them.

With Google Glass, customers could share their first-person view of the accident with the claims service representative and obtain guidance through the claims submission process, including which photos are most important to take.

Most personal lines carriers are trying to overcome these challenges and connect better with their customers by, for instance, providing mobile applications that enable self-service capabilities for filing claims and finding nearby tow and rental facilities. Carriers have also provided loss control videos on social media that customers can implement to prevent further damages to their property after an incident. However, most of the functionality offered to date has not seen high customer adoption.

With Google Glass, however, customers could share their first-person view of the accident with the claims service representative and obtain guidance through the claims submission process, including which photos are most important to take. The customer would gain confidence and trust from this expert guidance, and detailed information could be collected on the spot. Service representatives could also help customers with loss prevention measures; with their hands now free, customers could easily follow the instructions, reducing loss payout. This could reduce claims settlement time, as vital information is captured upfront, and significantly improve the claims submission experience. This approach could also drive increased adoption of the carrier's mobile applications, improving customer engagement.

Use Case #4: Improving Direct Visibility into Aggressive Driving

Because insurance carriers do not have actual data on driving behavior at the time of underwriting automobile policies, they use proxies such as age, gender, marital status and number of miles driven. These proxies are based on statistical correlation of loss data to various determinants.

Some personal and commercial lines carriers have launched telematics and usage-based insurance programs for both personal and commercial auto insurance to collect actual driving data for underwriting and pricing. (For more on this topic, see our white paper, "The Telematics Advantage: Growth, Retention and Transformational Improvement with Usage-Based Insurance.") So far, these approaches have experienced limited adoption, and in the commercial auto space, telematics is primarily used for fleet management rather than insurance.

Google Glass will produce a deluge of photos and videos over the Internet. When drivers wear Glass, it will be difficult for reckless/aggressive drivers to escape notice, as people with Glass could easily record reckless driving and upload the images and videos to a Web site. This use case presents some legal limitations, as lawmakers in some states such as West Virginia[17] have already introduced legislation banning the use of wearable computers with head-mounted displays while driving, and a woman in California[18] was ticketed recently for driving with Google Glass. However, if these challenges are overcome, Glass could provide significant information to insurance carriers for better risk selection and pricing.

Looking Ahead

As technology continues to evolve, it will present insurers with a goldmine of opportunities and challenges. It will become increasingly vital to adapt or risk losing business to technology-focused competitors — something insurers in particular can ill afford in a slow-growth industry.

Google Glass promises to be the next wave of the technological revolution, with the potential to change consumer behavior and disrupt industries with new ways of doing business. As customers adopt Glass, they will expect to execute insurance transactions using this technology, and insurers need to be well-equipped to meet these demands.

In its current form, Glass will have limited business use, but the features and capabilities needed to enhance its use and adoption already exist or are taking form today. With the speed of technology evolution, it is not a question of "if" but "when" these product features will be integrated.

As insurance carriers build business and technology use cases, as well as architecture and services, for mobile devices, they must consider how and where wearable technology such as Google Glass fits into their roadmaps. As such, insurance carriers should begin preparing for this technological innovation now. Let the strategizing and piloting with employees and customers begin.

Note

Illustrations by Steve Dininno.

Footnotes

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About the Authors

Michael Kim is the Global Head of Cognizant Business Consulting's Insurance Practice. He has 25 years of management consulting experience in the insurance, healthcare and financial services industries. Mike has advised leading insurance companies on strategy, operations and technology issues across sales/marketing, distribution, underwriting and claims. He can be reached at Michael.Kim@cognizant.com.

Agil Francis is a Senior Manager with Cognizant Business Consulting's Insurance Practice. Agil has 10 years of management consulting experience in the insurance industry, where he has advised senior client executives on strategy, operations and technology issues across sales/marketing, distribution, underwriting and claims. Agil can be reached at Agil.Francis@cognizant.com | Linkedin: http://www.linkedin.com/pub/agil-francis/37/225/863.

Rohit Gupta is a Senior Manager in Cognizant Business Consulting's Insurance Practice. Rohit has 16 years of management consulting and IT experience in the insurance industry, where he has advised senior client executives on strategy, operations and technology issues. Rohit can be reached at Rohit.Gupta@cognizant.com | Linkedin: http://www.linkedin.com/pub/rohit-gupta/4/270/672.

Manish Kumar is a Senior Consultant with Cognizant Business Consulting's Insurance Practice. He has eight years of business consulting and program management experience in the insurance industry. Manish specializes in P&C insurance and can be reached at Manish.Kumar9@cognizant.com | Linkedin: http://www.linkedin.com/pub/manish-kumar/4/216/89a.

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COGNIZANT

World Headquarters

500 Frank W. Burr Blvd.
Teaneck, NJ 07666 USA
Phone: +1 201 801 0233
Fax: +1 201 801 0243
Toll Free: +1 888 937 3277
inquiry@cognizant.com

European Headquarters

1 Kingdom Street
Paddington Central
London W2 6BD
Phone: +44 (0) 207 297 7600
Fax: +44 (0) 207 121 0102
infouk@cognizant.com

India Operations Headquarters

#5/535, Old Mahabalipuram Road
Okkiyam Pettai, Thoraipakkam
Chennai, 600 096 India
Phone: +91 (0) 44 4209 6000
Fax: +91 (0) 44 4209 6060
inquiryindia@cognizant.com

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