CHEAT SHEET

- *AI rise.* In 2026, in-house legal departments will only employ a handful of lawyers. Developments in big data, artificial intelligence, algorithms, and legal models will enable the business to handle legal issues through automation.

- *A role transition.* In-house counsel will always be needed to oversee the success of artificial intelligence. The skilled lawyers of today, who can team up with intelligent AI to make judgment calls based on experience, will be more likely to succeed through this transition.

- *The moral center.* The in-house counsel of 2026 will have to be the ethical conscience of the company. To a greater extent than they are today, the in-house counsel will be expected to argue the case with management and the board.

- *In the future.* Understanding that a specific solution might be within the law today, but not tomorrow, has tremendous financial worth for the company. Being able to tap into changing sentiments will steer decisions away from risk.

IN-HOUSE IN 2026: BETWEEN SCYLLA AND CHARYBDIS

By Jaap Bosman Being an in-house lawyer is a very demanding profession. You will find yourself navigating between the commercially driven demands of the business and limiting regulatory restrictions. At the same time, it is an exciting and fulfilling vocation. In-house lawyers actually contribute to their company's success. However, being completely absorbed by the tasks at hand makes it difficult to look ahead and think about how your role and profession might change in the future.

For an essay we wrote in November 2016, we turned to business leaders — the people who lead the organizations in which in-house departments operate — and devised five hypothetical and extreme scenarios on what in-house could look like in a decade. Will the in-house counsel still be considered a lawyer? Will the computer have taken over? Will in-house counsel be the ethical helmsman who steers the company between Scylla and Charybdis?

In five hour-long interviews, business leaders of large international organisations shared their vision of what the in-house profession should look like in 2026.[1] Out of the interviews emerges pointers that will help in-house lawyers navigate through those perilous waters on their way to the future. For the purpose of this article, we picked two of the scenarios that we think contain the most thought-provoking predictions.

Scenario one: The computer takes over

In the year 2026, in-house legal departments of large corporations will employ a mere handful of lawyers. Developments in the areas of big data, IT, artificial intelligence (AI), algorithms, and legal models will enable businesses to handle most legal issues through automated systems.

"We have been talking for 30 years about expert systems! It's nothing new," says one of the interviewed business leaders. Another business leader finds the technological innovations in the legal sector limited and disappointing. In general, though, they all agree that computers will increasingly take over work that is more complex than what computers can handle today. "Ninety percent of the problems will be solved by AI, the other 10 percent will become more complex."

The computer debate for lawyers arguably started with Watson. Since Deep Blue's victory over Garry Kasparov in the 1997 chess re-match, IBM had been on the hunt for a new project to show off its capacity. A team within IBM decided to build a cognitive system that could interact in natural human terms, understand the questions that humans ask, and provide relevant answers that humans can understand. They named the system Watson after IBM's first CEO Thomas J. Watson. Having started on the idea in 2005, Watson went on to beat the former winners of *Jeopardy!* by 2011. This was a phenomenon in the tech world and would have little to do with lawyers had not the general counsel of IBM at that time, Robert C. Weber, suggested that Watson might be used for legal research. In an article in the *National Law Journal* in 2011, Weber wrote that computer's AI could be a boon to legal research. "Imagine a new kind of legal research system that can gather much of the information you need to do your job — a digital associate, if you will," Weber wrote. He explained that lawyers can just pose a question and the technology

ROSS was born out of the Watson University Competition held by IBM in 2014, in which IBM asked 10 elite schools in the United States and Canada to put together teams and identify an industry-specific challenge to solve using Watson. The student teams were given direct access to Watson in the classroom via course curricula and the Watson Developer Cloud. The teams were asked to develop a prototype app and support a business plan based on their industry of choice. When the jury announced the winners in the beginning of 2015, ROSS finished in second place and its founders from the University of Toronto decided to transition the project into an independent startup.

ROSS was not the first computerized legal research program, but its partnership with Watson made it the first to incorporate AI. When experts use the term AI, they usually mean a form of machine-learning system: one that can learn from input and adapt accordingly. The system needs a teacher who will provide the machine with feedback and label all information that is put into it for the machine to learn. Lawyers can ask ROSS research questions in natural language, just like they were talking to a human. ROSS reads through the law, gathers evidence, draws inferences, and returns with an answer in the form of a hypothesis backed by references and citations, rather than thousands of results you would need to sift through when using a search engine. The program will improve the more it is used. There are AI systems that can learn by themselves — deep learning or neural networks — however, these require a vast amount of data and experts query whether the legal market contains enough data to ever be able to use this.

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behind Watson can "analyze hundreds of millions of pages of content and mine them for facts and conclusions — in about the time it takes to answer a question on a quiz show." Weber added that Watson will never be able to replace lawyers, but it can extend their capabilities.[2] Even so, the ensuing flood of speculations amongst lawyers has not stopped since.

Watson is not a single entity but rather a developer cloud, which IBM has since made available in different applications that other developers can use. ROSS Intelligence was the first artificially intelligent lawyer using the Watson technology. ROSS (the abbreviation actually does not mean anything) can understand a complex question, look through a vast database of stored documents, and then give you, in simple, natural language, the right answer. ROSS needs to be trained in legal principles or case law just like a human lawyer trainee. In a conversation I had with Andrew Arruda, CEO and co-founder of ROSS Intelligence, he emphasized that ROSS is not designed to make decisions or to replace the senior lawyer. That is just what the media will sometimes have us believe. ROSS is meant to help lawyers wade through all the data that exists and put the relevant pieces so they can make better decisions. Having been a practicing lawyer himself, Arruda even thinks that, in the future, it will be considered borderline negligent not to use something like ROSS. In fact, ROSS has already been "hired" by large law firms in the United States. Watson is not the only service offering AI for the legal market. On a more basic level, computers can already relieve the lawyers from work burden by performing contract analytics to pull out metadata and clauses from contracts that would otherwise require a lot of reading. The further standardization enters the work of legal departments,

the more suitable it will be to deploy machines as support.

Professor Ajay Agrawal of the University of Toronto approaches the rise of AI, or machine learning, from an economist's perspective. The introduction of calculators lowered the cost for people to perform basic arithmetic. In the same way, calculations were applied to many other fields with an impact on the cost. For example, computer power was applied to the old-school field of photography to create digital cameras, which shot up in value as the value of light-sensitive film cameras plummeted. Recently, researchers have developed an AI system that could predict the correct outcome of roughly 600 human rights cases 79 percent of the time by the European Court of Human Rights. Just like the creators of ROSS, the researchers explained that, while the tool could help discover patterns in the court cases, they did not believe AI will be able to replace human judgement. Professor Agrawal argues that the rise of machine learning, such as this example, will lead to "a drop in the cost of prediction," and a "rise in the value of human judgement." The 10 percent that our interviewed business leaders designate as work for human lawyers will be given to those lawyers excelling in judgement.

Will this require a new type of lawyer? Think of self-driving cars. Humans will go from being drivers to overseeing a self-driving system. These are two very different roles and require different skills. You might be a good driver but not be very apt at observing a computer system or spotting when that system is not functioning properly. The lawyer being helped by AI will have no use of being able to reproduce the law but will need to be good in staying alert and knowing how the AI operates in order to evaluate the results. In November 2016, German Chancellor Angela Merkel called on major internet companies

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to make algorithms more transparent. Algorithms used by search engines such as Google and Bing determine what you see when you type a search query into them. An internet user, argues Merkel, should have the right to know the logic behind the results presented to him or her. "Algorithms, when they are not transparent, can lead to a distortion of our perception; they can shrink our expanse of information," says Merkel. This is indeed food for thought. With AI entering the workplace, it might not only be useful that a lawyer understands the algorithms he or she relies on, but could even become a requirement on the grounds of liability.

Taking this line of thinking a bit further, the lawyers of today might be far more apt at working together with AI than future lawyers. Today's lawyers are likely to make the transition from being autonomous "drivers" to being system operators. Having started off as drivers, they might be better equipped at making judgement calls than future lawyers who will lack such experience. Automatic systems tend to fail either in unusual situations or in ways that produce unusual situations, requiring a particularly skillful response. At the same time, automated systems or intelligent machines will have denied humans the

chance to acquire the necessary skills. Using the self-driving car scenario again, people who get their licenses in a few years are likely to only have to take control in rare situations, but those situations are going to be the most extreme and dangerous. At the same time, these new drivers never gained any driving experience. This is called the paradox of automation.[3] It is a concept formulated in psychological theory which means that the better the automatic systems, the more out-of-practice human operators will be, and the more extreme the situations they will have to face should the automatic system be unable to cope. Loss of skill occurs in many situations where computers and automation have "spoiled" us. The calculators have lowered the cost for people performing basic arithmetic, but many of us now struggle to make simple calculations on our own. A future lawyer relying on automation may not get the opportunity to develop the instinct that comes from experience and which makes an average lawyer become a good lawyer. Looking at it this way, the skilled lawyers of today, who can team up with the intelligent machine and make judgement calls based on experience collected in the trenches, might be the best lawyers we will ever have. A future lawyer who never got the chance to strengthen their experience as a result of machines could endanger the quality of the whole system.

Who and what will help the future lawyer use intelligent machines safely is yet to be presented. One of the interviewed business leaders has an interesting view on this: The IT revolution has more similarities to a real revolution than you think. No revolution is plain sailing, there will be casualties. Failure along the way is part of it and, more often than not, it will get worse before it gets better. Be prepared to see blood. Getting to a stage where machines and humans operate safely together will be a rough ride.

Business leaders are in agreement: In-house counsel will always be needed for judgement calls. One of them captures this essence: "The AI system can unearth all relevant case law. It can present connections and detect patterns. But that is all based on history. A good lawyer will take all that and still argue why, this time, we will have to look upon it completely differently. That is something AI will never be able to do."

Scenario two: In-house counsel will be the guardian of ethics

The in-house counsel of 2026 will, above all, be the ethical conscience of the company. In-house counsel will, to a greater extent than he or she is today, be expected to be the guardian of the company's ethical dimension and will, if necessary, be expected to argue the case with management and the board.

Published in January 2016, a study by the New York Stock Exchange and legal recruiter Barker Gilmore, asked directors and officers from 200 listed US companies to think about the changing role of in-house counsel within companies. The resulting report, entitled "The Rise of the General Counsel," reveals that the most valuable characteristics of the general counsel of the future, according to survey respondents, are sound judgment and high integrity, cited by 72 percent and 69 percent of executive managers respectively. Legal expertise came in third with 63 percent. On the grounds of this survey, it seems that high integrity scored higher than most other desired traits, and that CEOs wanted their general counsel to indeed be ethical guardians.

The interviewed business leaders all balk at this idea. They emphasize in all the interviews that it is important that the in-house lawyer must not be seen as monopolizing the role of ethical guardian. The notion that the in-house lawyer would be the official guardian of ethics is a frightening thought since it implies that other key players will not be required to be equally vigilant. An in-house counsel is human along with all the other people in an organization. Every one of them should have an ethical awareness and speak up when they find that their organization is in violation. The company culture will herein be a determining factor. "The organizations wherein a dilemma can be signaled at every level and discussed will be the winners in the long term," says one interviewee. "Ethical is something you are as an organization. The sum of the people working there and its management. It is not something you can outsource." Herein lies a danger for the companies that have created large compliance or risk management departments, one business leader points out. It takes away responsibility from all the other departments, leaving the company vulnerable. The companies that implement compliance throughout the whole organization will be more future-proof.

As we are moving toward increasing involvement of artificial intelligence it means more and more issues in a company will be solved by a machine with no conscience. The role as "ethical guardians" will therefore become all the more important, but here as ethical guardians of the machines. "Moral awareness will remain difficult for computers. They remain zeros and ones," as one business leader puts it. Being ethical, being human, will become even more crucial. A while ago, we learned of the machine learning algorithms used by US police to allocate police resources to likely crime hotspots, and how these tools are often considered to be racist. Just like training ROSS to become a useful lawyer is done by the lawyers "employing" ROSS, the police algorithms are trained by the police using them.

Machine learning magnifies any bias that the teachers might have. If a company only hires young white male applicants, a machine learning algorithm will learn to exclude all other types of applicants without anyone having to tell it to do so. The problem is that the use of algorithms often provides a surface of objectiveness while hiding unethical outcomes in practice. In January 2015, Stephen Hawking and dozens of AI experts signed an open letter calling for research on how AI could impact society. If we get it wrong "the development of full artificial intelligence could spell the end of the human race," Hawking told the BBC. Microsoft co-founder Bill Gates was a partner at K&L Gates before his retirement. This law firm recently donated US$10 million to fund a research center at Carnegie Mellon University in New York, dedicated to questions involving the intersection of ethics and AI. All these concerns at the highest level gives us hope that humans will remain in charge. We are often led to believe that our world will be shaped by computers. Lawyers will have to get used to technology. This might be so, but it does not exclude that the opposite is also true. We will have a role in shaping technology. And lawyers might just be more apt than most in offering the resilience and patience it takes to make technology work for them. Because trust is hard earned with a lawyer. When it comes to their work, giving up control and independence will take certainty and not faith. And that is a good thing.

It seems attention is starting to be paid to the consequences that computers will have on ethics. So far, so good. We can also all agree that the in-house lawyer should not be solely responsible for flagging ethical issues. But when we ask in-house counsel to contribute to help "guard ethics," what precisely are we asking them to do? How could an in-house lawyer be better suited than anyone else to

help identify issues that may contain an ethical trade-off? The concept of ethics can sound very subjective and lawyers in particular become nervous when they are given a task which seems fleeting and undefined. As one business leader emphasizes, "Each society will be different as well." Ethical behavior in France can be completely different from ethical behavior in Japan, just to name an example. This means that "good" is not necessarily always good and "bad" not always bad. It is therefore important to try to clarify what we are talking about when we discuss ethics and business. It goes way beyond corporate social responsibility, which is a form of a company's citizenship expressed through waste and pollution reduction processes as well as educational and social programs. As someone points out, "Ethics can be seen as part of a process. It's the process that takes over where compliance ends." Compliance is making sure that everything we do today is lawful. When we look at our business tomorrow, whether it will still be in compliance or not becomes less certain. This is where ethics become guiding.

A company will be operating and making decisions regarding the future in accordance with its risk appetite. Every organization has a risk appetite, whether it acknowledges it explicitly or not. Risk appetite is the mutual understanding between executive management and the board regarding the drivers of, and parameters around, opportunity-seeking behavior. Ethics has an important role when deciding upon opportunities and this is where the in-house lawyer can add great value. If we abandon the idea that ethics is about pointing out what is good and what is bad it becomes easier to handle. In reality, good and bad is seldom a question of black and white. A business is dealing with evolving sentiments in the society in which it operates. The in-house lawyer can add

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great value to this process by bringing developments into the discussion that might have a consequence for future laws and regulations. This can at least lead to early identification and possibly even early adaptation. Understanding that a specific solution might be within the law today, but probably not tomorrow, has a tremendous financial worth for a company. Looking at the Panama Papers incident, for example, the companies caught in the limelight all defended their position with the argument that they acted within the law. And yet, in many countries, it was clear that this did not automatically make it right. What is normal today might not be normal tomorrow. Being able to tap into changing sentiments will steer decisions away from short sightedness. Understanding the context of your own society and the discussions that are going on in it will be key. When discussing flagged dilemmas in the organization, the talented in-house lawyer should be able to spot the relevance of developments going on in society and bring these into the debate. The people interviewed all agree, the increasing demand for an in-house lawyer to have social "tentacles" will contribute to the changing profile of their profession.

The case of Volkswagen and the emission scandal is worth looking at to try to understand how a company can get the ethical dimension so wrong. In hindsight, the ethical

failure is always clear. Someone should have spoken up at the point when they decided to go ahead and install a defeat device in the cars. But circumstances at the time probably were not a case of black and white. This is what makes being an ethical guardian such a tough job. Let us sketch a scenario of what might have gone on in Volkswagen leading up to the emissions scandal as it could prove instructive.

At the time when Volkswagen decided to cheat the emissions test, regulations had become stricter, especially in California, the market where Volkswagen was looking to compete. There are many rules a car has to comply with and tests have been devised by authorities to make sure they adhere to them. These tests are highly theoretical. For example, a car has to comply with rules on fuel consumption. This is tested in a lab following specific rules, but both authorities and car makers know that the fuel consumption measured in the lab test does not reflect the real fuel consumption of the car when used on the road. Before testing on an outdoor track, the car manufacturers pump up the tires to their maximum because this reduces resistance. They place tape over all gaps and remove the windscreen wipers to reduce drag. In many countries, including the European

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Union, this is all allowed and all car manufacturers do the same.[4] When it comes to in-door testing facilities car manufacturers have long been dedicating resources to ensure the car behaves in an optimum way during the prescribed testing cycles, also using software. In real life, with a normal people as drivers, these results can never be achieved. Reducing the weight of the car, or using special lubricants are also ways of influencing the results. With this in mind, we turn to look at the emissions debacle. There was an option for Volkswagen to place a device in each car that would genuinely reduce emissions but which would increase the price of the car to make them less competitive. It would also affect the driveability and fuel consumption of the car when

driven on the road. Volkswagen opted to take a look at the testing requirements instead, just as they, and all other car makers, had done when it comes to fuel consumption tests. By inserting software, the car would recognize when being tested and would behave in the optimal way to reduce emissions. The problem seen from the perspective of the car manufacturer at this time was less black and white. Looking at the ethical trade-off they made at this point, Volkswagen has afterwards admitted that it did not have the correct understanding of the extent of the scandal or the magnitude of the possible fines involved. The regulatory fine in the United States was assumed to be "in a two-digit or lower three-digit million" range. How could they have been so wrong? What they had missed was the shifting sentiment in the United States. Supervisory authorities in all sectors were not only becoming more aggressive, they also tended to look at foreign corporations first. The signals were there. What Volkswagen allowed to happen, because they assumed it was part of a traditional grey area of testing, was in fact the next blatant example of corporations cheating consumers and foreign car manufacturers unfairly competing with the US car industry. They thought they were being "a little bit

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unethical," facing a lower three-digit million dollar fine as a maximum. They did not see that, by tomorrows standards, they were acting in a "15-billion-dollar-unethical-way."

Looking at the outcome of an ethical process as merely the result of an economical evaluation, then a lawyer is arguably not the best equipped to handle this process. But looking at ethics as flagging changing sentiments with regard to unacceptable behavior in the society in which they operate, then the in-house counsel is one of the best positioned to make a valuable contribution. This was also pointed out by the interviewed business leaders in the discussion of the qualifications of the future in-house counsel. Acting in a forward looking way will be key. Understanding that a specific solution might not be acceptable tomorrow and bringing to the table the context of society, has a tremendous financial worth for a company. This is perhaps the practical side of ethics rather than the moral high-flying of good and bad, but defining the ethical process in this way might at least make it more achievable. **ACC**

NOTES

1   The interviewed business leaders in alphabetical order are: Sven Dumoulin, general counsel and member of the executive committee, AkzoNobel; Erik Lagendijk, chief governance and compliance officer, member of the management board, SBM Offshore; Herna Verhagen, chief executive officer, PostNL; Jan-Willem Vink, general counsel, ING Groep; Peter Wennink, president and chief executive officer, ASML.

2   Robert C. Weber, "Why 'Watson' matters to lawyers," *The National Law Journal*, February 14, 2011.

3   An interesting read on this phenomenon is "Crash: How computers are setting us up for disaster," by Tim Harford, published in *The Guardian*, 11 October 2016, *www.theguardian.com/technology/2016/oct/11/crash-how-computers-are-setting-us-up-disaster.*

4   See for example, a report from Transport & Environment organization in Europe, "Mind the gap, why official car fuel economy figures don't match up to reality," March 2013. Also, Danny Hakim and Hiroko Tabuchi, "Volkswagen test rigging follows a long auto industry pattern," *The New York Times*, September 2015: *www.nytimes.com/2015/09/24/business/international/volkswagen-test-rigging-follows-a-long-auto-industry-pattern.html.*