

AI in Application:

An in-depth examination from
the legal profession



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Chapter 2:

Preventative maintenance – how AI is helping reduce internal risk at Bates Wells Braithwaite

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During the first couple of months of 2018 I have participated in round-table discussions on AI in law at the British Academy, the Legal Week Business of Law conference (where I was an “ambassador for innovation and disruption”) and a Managing Partner Forum. I also regularly meet with Thomson Reuters, Lexis Nexis, and the CEO of Sysero and attend legal/IT conferences and exhibitions.

Within those forum (aside from those sales people who think using the description AI is like stardust for their product) there is an almost universal consensus that the public and the legal profession’s general understanding of AI is somewhere between unhelpful and wrong. Do not think that machines can do anything other than respond to the programming of human beings. However, what has changed is the immense processing power and programming techniques and tools which have become readily available and at low-cost.

My preferred definition of AI is taken from a BBC radio interview with a Professor of Artificial Intelligence, who said it is “anything that removes the need for human intelligence in achieving the desired outcome”.

In a recent *Desert Island Discs* on BBC Radio 4, Gary Kasparov, the former world chess champion, spoke of the first time he was beaten by a computer. He said it was not done by artificial intelligence, but by “brute computing force”. In any situation with a set of defined rules, the computer will always win. Its ability to understand defined rules and then run through a million or a billion potential scenarios to determine its next “move”, is its winning strength.

So, concentrate on ideas that achieve the objective of your firm or its clients, without the need for human intelligence. That does not mean the total removal of human intelligence. Within any process there will be elements where the brute force of the computer will always be more effective than the human. However, once the computer has undertaken

much of the heavy lifting and can present a small amount of totally relevant information for decision making, the human can then be 100 percent effective. The human role is best achieved by concentrating upon this distilled core information and then making the ultimate decision.

Matter level risk assessment – an example of AI?

For the user of BWB's system (see below) it is a very simple process. Originally 10, now 20, multiple-choice on-screen questions are answered, each of which has up to five choices or a simple yes/no. For 95 percent of the risk assessments undertaken – generally taking under five minutes – no action is required. The matter has been scored as medium to low risk, in all risk categories, for the person who completed the risk assessment.

Even with 10 questions there are more than 750,000 possible permutations of answers, of which over 1,000 combinations of answers will produce a call for human action because a risk has been identified.

Each answer is given a particular weighting depending upon the risk which is being measured – and the system is simultaneously looking at 10 different risks, each using a different weighting – from professional indemnity to anti-money laundering, reputational to data protection risk.

Those weightings are mathematical, e.g. if your total score from 20 questions is over 40 points for professional indemnity risk, it is classified as PI “danger”. That classification (and how it was made up) generate text on score sheets, bespoke advice, signature blocks for required authorization, emails are sent to risk managers, AMLOs, data risk managers, or a meeting of the reputational risk group is called, and that matter will be selected for file review, when that next takes place.

No human intelligence could take the score answers, determine the results for 10 differently weighted risks and ensure every action was taken for one risk assessment, let alone 40,000, as effectively as the computer. The human would be bogged down with detail and boredom as they assess the 95 percent of matters that are low risk and require no action. However, as a human, the experience of concentrating on the five percent identified as danger (about 12 a month) allows for effective management intervention as the graphs below demonstrate.

Two examples indicate why some might think the system has artificial intelligence in the populist version of AI.

We have identified that the greatest risk factor is undertaking work for which the lawyer has no expertise. For that reason we ask many questions which probe this area, one of which is “How many times have you undertaken a similar transaction in the last two years?” However,

we are aware that with human nature, some lawyers may claim to have undertaken a similar transaction within the two years, when in fact it was several years ago. Given we have accurate records for every matter undertaken by every lawyer for the last 12 years within the risk management system, I realized that we could plan out that question because the information was already held by the system.

That is where processing power combined with big data can appear to be providing populist artificial intelligence. You can imagine the reaction from the lawyer if the computer responded to the lawyer after answering this question, “You are wrong, the matter you are thinking about was three years, 248 days ago”. Our system does not speak (but it could!), and if it did speak the above words, most lawyers would say it must have “artificial intelligence” – but it is just computing power, big data and programming.

Secondly, following an incident, we added a question asking if the value of the estimate on the matter was over £100,000 – taking that as a proxy for a large and complex matter. That led to discussions with our corporate department, which said that such transactions were bread-and-butter for them and was part of their core expertise. Following debate, we agreed with their analysis and so weighted the answers differently, depending upon the department of the lawyer. That means that two lawyers with identical answers will be given different results by the risk system. One may require no action, the second – where they do not routinely deal with large matters – being assessed as danger and requiring special clearance. Is that intelligence?

The system has grown by small increments over 12 years. The same simplicity occurs for the user, but the value extracted from the data has been multiplied many times over. Indeed, such is the complexity of algorithms that even I, as its creator, now struggle to fully understand all of the actions that it generates. However, I do know that it has given great benefit to my firm, and it has universal application to any professional services firm, worldwide. Read on for the details.

A “devastatingly effective” matter risk system – 12 years of evidence

This chapter shows how a very simple system has been effective in managing not only professional indemnity risk, but also the many other regulatory and reputational risks around client work. In 2006, I conceived and installed a simple, but devastatingly effective, matter-level risk management system which is now used by all 150 earners

(including for non-legal services) at our firm, on every new matter. It takes two to three minutes for the fee earner to use and has gained the highest level of immediate fee-earner compliance. It is now undertaken 100 percent of the time – without complaint – by the fee earners and partners.

The impact of the system was immediate, long-lasting, and dramatic in reducing the number of reported professional liability incidents and, more importantly, professional indemnity (PI) claims. That led to a dramatic reduction in our PI premium annual costs. We have saved Bates Wells & Braithwaite £6m since 2006 and over £1 million in 2016, when PI premiums reduced by a further 35 percent.

Figure 1 shows what we would have paid, had we kept our 2006 premium rating, and compares that with our actual payments. Figure 2 shows our PI insurance payouts total after the risk management system was introduced in 2006. Figure 3 shows the impact it had on PI claims needing cash reserves/payouts.

The demonstrated benefits of the matter-level risk management system should indicate that this has universal application to any professional services firm in any jurisdiction. It has grown to be effective at managing all the main areas of risk (and compliance), and has developed into a bottom-up management information system of unique power.

The eureka moment

The risk management system was conceived in a “eureka” moment in 2006. Our PI premiums were very high and getting higher, with a spate of recent large claims. The first PI renewal after my arrival as COO was difficult and expensive. That spurred me to read the lawyers’ reports prepared for the PI underwriters on every claim the firm had suffered for 15 years. The reports are detailed – about ten pages each – and are factual and unbiased. I suspect I was the only chief officer in any law firm who had ever read these reports in such detail.

As I read each one, a pattern began to clearly emerge of universal high level common risk factors. After reading all 15 years’ of reports, I realized that the risk factors established in my mind after reading the first 50 percent had not changed after I had finished reading them all.

Creating the system

The simple multiple choice question screen – originally 10, now 20 multiple-choice questions – isolates the 5 percent of matters that need

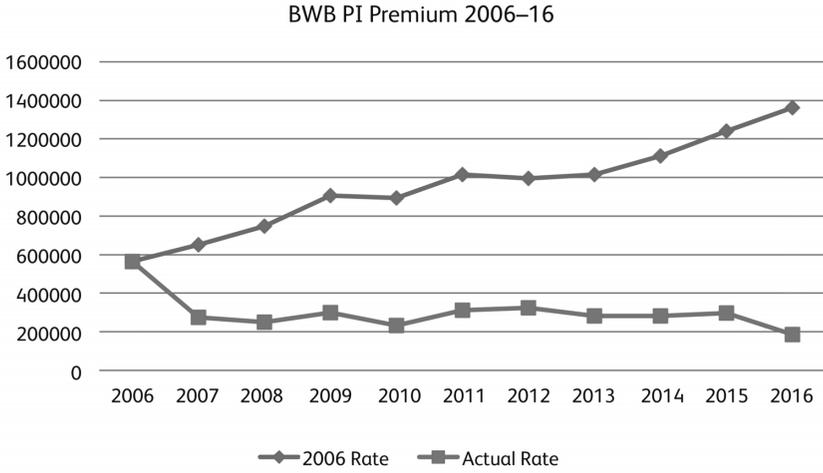


Figure 1: Actual versus 2006 premium rating

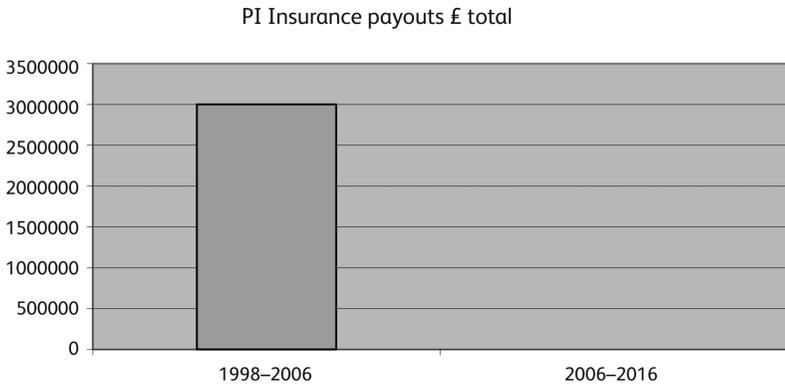


Figure 2: PI payouts after introduction of the risk management system

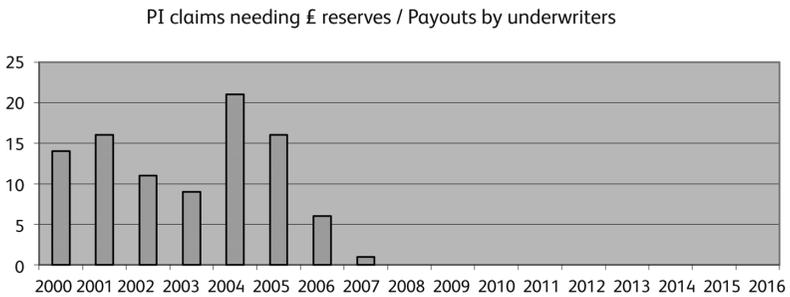


Figure 3: Impact on PI claims needing cash reserves/payouts

real management focus. Just as importantly, it identifies the 95 percent of matters that are routine and low risk which can be dealt with by a light regulatory and management regime.

I was surprised that after nearly 40,000 BWB risk assessments over a ten-year period, danger and high risk matters for general PI risk accounted for only three percent of BWB cases. Carefully managing those three percent was the difference between insurers paying out £3 million over eight years before we introduced matter risk assessment, or paying out nothing in the 12 years since the introduction of matter risk assessment.

A proportionate grading system escalates a matter up the risk management system. At first this was purely driven by a single risk score – no action, one partner signature, two partner signature, email notification prompting a discussion on how risk was going to be managed with the risk manager, and inclusion in the management board risk report. Later, a significant number of single answers would produce a specific and targeted response e.g. we ask for an estimate of the total potential liability of a matter and offer a range with the final option being “over £75 million” which is our current PI cover limit. That option is regularly triggered and brings an immediate case close down.

Expanding the scope

In the past three years, we have further expanded the scope of the matter level risk assessment to cover:

- AML risk;
- reputational risk;
- personal sensitive data;
- market sensitive data;
- newsworthy data;
- potential and managed conflict;
- own interest conflict;
- managing the exceptionally large case (fees over £100k);
- PI liability over £10 million;
- political lobbying activity; and
- financial crime.

All of these are extremely complex areas of risk that are traditionally hard to manage. Once identified as a high risk in each category, a complex set of targeted actions are automatically generated.

Take reputational risk: we proactively prevent any potential brand damage that may come from taking on new clients or matters. The risk management system does not take the decision, but it does isolate the one percent of matters/clients which must be reviewed by our reputational risk group before fee earners are allowed to proceed. Undertaking an in-depth matter risk assessment pre-empts failure and protects the firm's reputation.

Lawyers will not sign an untrue document

The power of the system is that if great care is taken with the question, you will get a true answer. A good example is when we introduced a question on personal sensitive data. We asked partners to sign that they were following a "20-point data security plan" if they answered that the matter being risk assessed contained "personal sensitive data as defined under the Data Protection Act."

In several departments we had uproar, as 70 or 80 percent of all matters required the partner to declare that they were following the 20-point plan, which included, amongst other things, locking paper files away and only taking them out of the office in a locked container. We were asked to water down the question. However, once the partners and lawyers began to discuss the fact that the loss of such files would require reporting to the Office of the Information Commissioner, and it would be a material breach for the SRA, they realized the importance of both identifying high-risk files and protecting them. That 20-point plan had always been known about; the risk management system suddenly made it a reality, and compliance with our systems increased dramatically.

It is the educative power of the risk system that creates the change in attitudes which has transformed risk with BWB and would do so in any firm that used all aspects of the system.

Creating a good risk management culture

The fact that the risk management system isolates a small number of high-risk matters and concentrates upon them, makes practical sense for partners who are engaged in this process. When a matter is assessed as high risk, the partner is required to physically sign a paper which is automatically generated to say that they understand and can manage the risk involved. The pattern of their answers, and sometimes combination

of answers, is translated into bespoke advice within the printed risk score. The risk score is read with interest because it distils our expertise in providing advice on the best risk management strategy for that matter. For example, if the risk is being generated by a lack of knowledge/experience of a mid-level lawyer, the advice will be to consider switching the matter to a more suitable/more experienced lawyer.

The next level up from a single partner signature is the requirement to justify your risk management strategy to another partner outside of your department, when a second partner signature is required because of the very high risk of the matter.

The next escalation is a discussion with the risk manager. They receive a copy of the results by email at the same time as the partner score sheet is generated. This allows the experience of the risk manager to be shared with the partner – but only for the highest levels of risk.

Risk-based file review selection is used so that the highest risk matters for every fee earner are selected, whilst danger matters held by a fee earner are automatically file reviewed. The fact that staff know that high risk matters will be file reviewed ensures they are given appropriate priority.

Regular training takes place firm-wide, and within departments, to share with them risk maps of their own department. Discussing a schedule showing the department-specific risks is very effective, as is recounting the pre-2006 big claims against the firm that lie behind each question.

No one element of this process would be sufficient to change the risk culture, but taken together, the reinforcement of understanding where risk comes from, and effective strategies for managing risk, will and has transformed the culture and effective management of risk.

Once the matter level risk system begins to impact on notifications under the professional indemnity policy, reduces claims and makes huge savings in professional indemnity premiums, partners will become enthusiastic supporters for effective risk management.

The second eureka moment

A second eureka moment occurred with the realization that the matter level risk assessment was in effect creating a unique “barcode” for every matter our partners and fee earners handled. Individual scores are permanently attached to a matter and become the equivalent of a product barcode. Once there, it can be read and differently weighted for an infinite number of management, risk, and reporting purposes.

Each PI, money laundering, data, conflict and reputational risk assessment weighs (or ignores) each number of the bar code in a different way, to create its own risk result and consequent risk actions. The list of “danger” matters in each category of risk becomes our firm’s core risk register, excellent evidence of risk management for the Solicitors Regulation Authority.

Impact on the firm

We have come a long way since we first adopted risk management strategically. Risk management is now a default discipline at BWB. In fact, it has transformed our culture – unlike previously, and in most traditional law firms, individual partners no longer have the authority to override firm policies. More importantly, partners don’t want to supersede policies anymore – the system provides evidence and irrefutable information based on business rationale analysis.

Since implementing our risk management system, we have been able to concentrate all of our efforts on identifying and managing the five percent of genuinely high risk matters. Taken together, the system forces risk management into the day-to-day culture of partners, risk managers, and the management board.

After any incident we review whether the risk assessment questions correctly identified the risk and whether the questions needed adapting. No changes were made for the first five years. However, in the last five years we have slowly adapted the questions and weighting for professional indemnity risk and added new questions relating to other regulatory risk factors.

Twelve years’ experience has led to a reduction in the weighting given to the pure size of a transaction and an increase in the questions and weighting given to fee earners operating, intentionally or otherwise, outside their areas of competence.

Adding any new question to the risk questionnaire immediately reveals a whole range of risks that were previously hidden. The risk management system pushes those risks into the knowledge of the central firm management where they can then be managed appropriately.

Lessons for all firms?

From the very beginning, I knew that lawyers acting outside their area of competence were an important risk factor. Many of the changes that we have introduced following incident reviews aimed to identify different the circumstances that tempt lawyers to act outside their areas of competence.

We started with a simple one to five question, where one was core expertise and five was no expertise. We reinforced that with a question asking how many similar transactions they had experienced in the last two years.

Our reviews added, “Is this a service which we promote on our website?” That has picked up lawyers who are about to provide advice that no one in the organization is experienced to provide, let alone themselves or their supervisor.

Next to be added was “Is there any personal involvement from anyone in the firm?” Experienced lawyers’ professional judgment can disappear when they are acting for their granny or their boss’s granny.

Then came a question of whether the fees totalled over £100,000, including counsel fees. A lawyer may have technical competence on the area of law, but might not have experience of large case management. Adding a reference to counsel fees can be a pointer to a lawyer acknowledging lack of personal expertise, but expecting counsel’s advice to mitigate that lack of competence.

Ensuring lawyers (or any other professional services provider) do not act outside their areas of competence is the best way of ensuring you avoid professional indemnity claims. At the beginning of this chapter, I said that the PI claim was one end of a spectrum. A lawyer who operates outside their area of competence will also lead to a badly executed and managed case, which leads to cost overruns, late delivery, fee disputes, complaints, and above all a damaged professional reputation.

Risk, the barcode, and AI

With every matter bar coded as it enters our system (with part of that bar coding the lawyer and following a similar approach to risk assessing/bar coding each client), we are building up the “big data” on which AI can work. Already we compare risk scores with estimates and can give a “too low an estimate for this level of risk” message. We have an estimator tool which loads the price for high risk matters. We could relate the reply to the question, “How busy are you?” back to the estimate – if this fee earner is already at maximum capacity, either switch the work or if only they have the expertise, increase the estimate for this scarce fee earner resource.

Most systems look backwards at events already completed – and that is their limitation. BWB’s matter risk assessment acts at the very beginning of the legal process and allows action to be taken to manage potential problems before they occur. At a recent managing partner

forum meeting on AI, a hard core maths/engineer specialist linked to Hitachi trains said that in the physical engineering world the big impact of AI is within “preventative maintenance” – using AI to calculate when a system will breakdown and fix it before it does.

We can do the same in law – or I should say, that is what BWB has done over the last 12 years, and the system is increasingly effective and heading deeper into using aspects of AI.