Redefining the Intelligence Skill Set
Through the Prism of the Intelligence Analysis Impact Model

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Abstract. It is often said that the purpose of intelligence is to support decision making. However, few attempts have been made to define what this means in practice. Inspired by the development of impact models in disciplines such as journalism, this paper looks to bridge the gap between the intentions of the intelligence process and its results. We argue that an impact-based approach has the potential to redefine our understanding of intelligence work, as well as the models that inform it. Our focus, therefore, is on the outcomes and impacts that demonstrate intelligence’s value added. How should they influence the conduct of intelligence professionals? What skill sets are needed to generate such results? And what does this mean for the training and development of intelligence professionals? The research presented in this paper was undertaken under the auspices of the EU-funded VALCRI project, which aims to improve Europe’s criminal intelligence capabilities through a suite of advanced data processing, analytic, and sensemaking tools. VALCRI acknowledges that technology alone cannot address the challenges to effective intelligence work. As such, it has also sought to redefine the standards of intelligence training. The model presented is part of this initiative.

Keywords: intelligence process, intelligence analysis, impact models, results chains, Intelligence Analysis Impact Model

1. Introduction

Good intelligence products are no longer enough. To be effective, analysts must work toward a broader set of outcomes, those that ensure optimal access to a decision maker, as well as sharper thinking, decision making and action on the part of their customers. To this end, we present the Intelligence Analysis Impact Model, a tool to define these outcomes as well as the skills needed to realise them. Thereafter, we present a short case study to illustrate the practical application of this model to the development of a new curriculum for criminal intelligence professionals. The curriculum, together with our Impact Model was developed under the auspices of the EU-funded VALCRI (Visual Analytics for Sensemaking in CRiminal Intelligence) Project.

We begin, however, with a short introduction to impact models in general and their utility to our work.

2. What Are Impact Models and Do They Matter?

Impact models are simple tools to measure and evaluate results. They have various names and take a variety of forms, including results chains, logic models and outcome mapping models.¹ They are commonly used during the planning phase of large projects to determine the inputs and actions needed to produce the desired results.²

There are significant definitional inconsistencies in the field with different models often taking the same name. To avoid confusion, we will use the term “results chain” to describe one of the simplest forms of impact model. A results chain is a visual tool that presents how the inputs to a project or process are transformed into results. Such chains enable an analysis of the process dependencies and cause-and-effect relationships and that inform the realisation of one’s objectives.
A simple results chain is presented in Figure 1. Here, projects and processes use activities to transform inputs into outputs. These outputs allow us to achieve certain outcomes which result in higher level impacts. These impacts are not always predestined; they may happen or they may not. To quote Robert Penna, “In the end, impacts are what we hope for, but outcomes are what we work for.”

As we lack consistent definitions of different impact models, so too do we lack universal definitions of the various elements – inputs, activities, outputs, outcomes, and impacts – that make up the results chain. We opt to employ the following definitions for this paper:

- **Inputs** – resources, whether human, monetary, time, technology, expertise, etc.
- **Activities** – actions, often combined into processes
- **Outputs** – the tangible and intangible products of our actions
- **Outcomes** – short-term changes, benefits
- **Impact** – fundamental, higher-level changes

Impact models vary in detail and emphasis. For example, the results chains used by program managers emphasise activities and outputs. By contrast, there are general impact models that are not program, project or initiative-specific. A good example here is the “Journalism Impact Planning Gauge” developed by the Impact Media Project, which is intended to evaluate the impact of journalism projects. As such, it focuses primarily on the goals of these projects. While it does not explicitly talk about “outcomes” and “impacts”, its emphasis is squarely placed on the changes realised through one’s inputs, activities and outputs.

### 3. The Results-Centred Approach to Intelligence Studies

#### 3.1 "Thinkers" vs. "Doers"

The world of intelligence is similarly stuck in a definitional muddle. It is often said that analysts are “thinkers” while decision makers are "doers". This distinction is not without merit. Intelligence professionals are rarely involved in policy making and often have no knowledge of the grander objectives they are working toward. As such, and to quote Hoppe, analysts are “likely to view [intelligence artefacts which are means] as ends”. However, this distinction is also flawed, and serves only to reinforce the tired idea that “intelligence professional and the end-user belong to different professional cultures, perform in different spheres and have different goals.”

While it is true that analysis involves a lot of thinking, this is not for the sake of thinking alone. Rather, analysts think for the sake of doing. Indeed, if we wish to improve the process of intelligence, we must do so from the perspective of the doer, because doers think to achieve results. Unlike thinkers, doers start with the end in mind. They identify the results they wish to achieve, and then ponder the resources and activities needed to realise their chosen ends.

However, the literature reviewed for this paper suggests intelligence is more concerned with inputs (tradecraft, expertise, etc.) and activities (e.g. the application of structured analytic techniques) than with results. Indeed, when it comes to results our focus is almost exclusively on the packaging of...
intelligence products (reports, briefings, etc.). As Amos notes, “show[ing] … interest in what happens to the intelligence once it is delivered to the decision maker” is rare. It is also perfunctory. In a review of over 3,000 publications we found no major studies on this topic. While no review can claim to be truly exhaustive, the dearth of research is a point of alarm.

Critics are likely to argue that outcomes and impacts are not the domain of the intelligence professional and that such issues are best left to policy makers. We disagree. Unless the intelligence-policy continuum is addressed in a holistic fashion, any attempt to improve the process of intelligence is destined to fail. Simply put, how we think about intelligence informs how we do intelligence. And how we do intelligence informs our efforts to improve it. The goal of this paper is to encourage this shift in perspective by using an impact model to suggest the results analysts should work toward and the activities needed to do so.

This paper is not concerned with the outputs of intelligence, but rather with the outcomes and impacts of the intelligence process. To elaborate, analysis is the most common output of intelligence. Of course, there are many others. To quote Hare and Coghill, “Intelligence outputs are whatever intelligence organisations deliver to customers”. Nevertheless, analysis is invariably distributed as part of a finished intelligence product (written and oral briefings being the most common). These products are also considered an output and the most direct and immediate result of the intelligence process. Prunckun argues that this output should lead to a “deep, thorough, or meaningful understanding about a particular matter”. This understanding is what we call an outcome.

Put differently, and with reference to our impact model below (see Section 4), outcomes are derived from the products given to one’s customers. Taken together, these outcomes contribute to the two impacts analysts hope to have. The first is optimal access to one’s customers and decision makers. Optimal access lets the analyst develop stronger, mutually beneficial relationships with their customers. These relationships are critical to ensuring a second set of impacts: optimising the customer’s thinking, decision making and action in pursuit of their objectives.

To quote McLaughlin, “First and foremost what analysts produce should help policy officials think through the issues and choices facing them”. Thinking supports decision making. Quoting Sims, “‘intelligence’ may be best understood as a process by which competitors improve their decision making relative to their opponents”. Decision-making, in turn, leads to action. In the words of Omand:

The most basic purpose of intelligence is to improve the quality of decision-making by reducing ignorance … [In this way, W]e improve the dos of acting in line with our goals beyond what we would have achieved had we simply tossed a coin to decide between courses of action, acted on hunch or wrong information, or allow events in the absence of decision to decide the outcome.

Two things warrant further emphasis. First, our use of the words “optimal” and “optimised” are deliberate. Optimisation implies efficiency and effectiveness, and involves much more than mere improvement (which simply implies a change for better). Second, as noted earlier, an impact is a result we hope for but may not obtain. As Omand also observes:

The world of […] intelligence takes a strongly rationalist stance based on the assumption that more information will lead to less ignorance, thus better informed decisions can be taken that have a higher chance of being favourable and hence can lead to better outcomes: the steps connecting these statements are however not always obvious and straightforward … [Possessing secrets does not always confer advantage, nor is it always possible to act upon them.]

We could replace “secrets” in this sentence with the more general “intelligence”. Decision makers may receive intelligence, but this does not guarantee that their thinking, decisions, or actions will be optimised. Nevertheless, while success cannot be guaranteed, its chances can be increased. In any event, Section 3.2 elaborates the outcomes needed to achieve optimal access. Section 3.3 details
the outcomes needed to optimise thinking, decision making and action.

3.2 Optimising Access to One's Customers

The first set of outcomes are intended to give intelligence analysts optimal access to decision makers. Access is necessary to exercise influence. Without influence, one cannot hope to optimise thinking, decision making or action. The outcomes here are as follows:

- **Reach**

  Intelligence is only successful if it reaches the right person. At first glance, dissemination is relatively easy to execute. In the age of digital communication, it often requires no more than few clicks. However, ensuring that right people get the right product at the right time is rarely so simple. It may seem cost-effective to mass-distribute intelligence materials to everyone with at least marginal interest in their content. This strategy, however, often produces unintended consequences. Those who benefit little or not at all are prone to ignore future intelligence products that are more pertinent still. No one can be expected to read material they consider irrelevant.

  This is not the only challenge analysts need to address. A range of factors and circumstances can impair dissemination including over-classification, overzealous use of “need to know” principle, and the use of outdated distribution lists. Moreover, intelligence typically targets senior decision makers while ignoring lower-level staff who might benefit more directly from the material being disseminated.

  Reaching senior decision makers is fraught with difficulty. Decision makers are not obligated to use intelligence. The fact that they do use it is a matter of good will. Accordingly, intelligence must deal with customers who reject it or “cherry pick” what is consistent with their preconceptions. These situations present a challenge that most intelligence teams struggle to manage.

- **Captivation**

  Another measure of a successful relationship between analysts and decision makers is the ability of the former to occupy and hold the attention of the latter. Intelligence competes for a decision makers’ attention with many other information sources. These include personal interactions, inputs from non-intelligence staff members, and the media. Intelligence has to convince decision makers that its products merit their attention. In other words, it must offer value that other information channels cannot provide. This value-added may be derived from one’s sources or collection methods, but this is unlikely to be sufficient. Better insights are more likely to do the trick.

  Decision makers are often good analysts themselves. They are also likely to get valuable insights from their staff, colleagues, or even the media. To be of value, therefore, intelligence has to offer superior analytic insights. Moreover, as Bruce and George stress, analysis must be objective, timely and properly evidenced. Further, according to McLaughlin, “To succeed, the analysis has to be [...] digestible, and informed about the policy context”. In other words, intelligence should be sensitive to the specific preferences of a decision maker and distinct features of one’s situation. As Davis observes, “[W]hat provides value added” can vary. “One-size-fits-all” rarely works in the intelligence world.

- **Acceptance**

  Quoting Betts:

  For knowledge to be power, intelligence must be ingested and digested by policymakers. This does not happen automatically in a world of overloaded agendas and executive fatigue, especially in a world glutted with information.
Capturing the decision maker's attention is not enough. Even the best intelligence is worthless unless the recipients use the insights provided to guide their judgements and actions. In light of this, Handel identifies three tasks for intelligence: acquisition, analysis, and acceptance. He describes acceptance as key but also as “the weakest link in the intelligence process”. There may be many reasons why intelligence is absorbed but not used. For example, according to Dahl, "the question of why policymakers do or do not listen to intelligence depends [...] on two critical factors: their belief in the seriousness of the issue or threat involved, and their trust in the utility of the intelligence they receive".

Intelligence professionals can control some but not all factors that influence potential rejection. For example, the insights presented may suggest actions that are inconsistent with the decision maker's agenda. In such instances, the customer may decide to ignore the intelligence and there is little that can be done about this. As Steiner observes, decision makers “want predictability (i.e. no surprises); they want intelligence that makes their job easier, not harder; and they prefer intelligence that supports their bureaucratic agendas as well as their substantive ones”. Meeting these expectations is not always possible.

Still, some of the factors that inform acceptance can be controlled. They include quality, relevance, credibility, and timeliness. Such factors determine utility, and utility informs influence. There is no influence without utility. Quality, relevance, credibility, and timeliness are not independent of each other. As Petersen notes, credibility “exists when the product is seen as relevant, timely, expert, objective, and informed". Put differently, relevance is in the eye of the decision maker. Intelligence is driven by decision makers, and different decision makers need different things. As Fingar argues, “intelligence support is a retail activity that must be tailored to the specific needs and timelines of individual customers”.

Intelligence professionals can also control quality. Quality is key to credibility. It usually takes the form of rigorous tradecraft and results in what Hatch calls the "right insights”. He defines “the right insights" as “those insights that accurately describe a situation, add value for a consumer, are rigorously arrived at, and are soundly reasoned”. Of course, rigorous analysis is not enough. As Marrin writes, “intelligence analysts can increase the influence of the intelligence analysis on policy by being as transparent as possible in terms of the reliability of its sources, progression of its logic and argumentation, reflection of the analysts’ confidence in its conclusions, and incorporating structured analytic techniques as a framework for providing decision makers with an understanding of the social scientific underpinnings of the process”. Marrin goes on to say:

This helps in increasing policy receptivity over past practice where intelligence analysis ‘made the call’ in a way that was not transparent about how the judgment was made. When that happened, policymakers had the option of accepting or rejecting the entirety of the analysis. But with transparency in the production of intelligence analysis, decisionmakers can decide whether to accept the evidence, the logic, the argument, or the judgment of the analyst, or use it as a way to check or challenge their own judgments. Functionally, this changes the evaluative metric of influence from a bifurcated ‘accept or reject’ to variants of partially accepted or partially rejected based on the degree to which the decision-maker finds the logic, argument, conceptual framework, or supporting information compelling and useful, or not. This will lead to increased influence of intelligence analysis on policy-making as decisionmakers take from the intelligence analysis the parts they find useful rather than solely the bottom line judgment.

Finally, intelligence can control timeliness. As Betts observes, time is “the dominant problem for policymakers in using intelligence”. Decision makers lack spare time. Moreover, the window of opportunity within which one can make an optimal decision is limited. Intelligence must be sensitive to time-related considerations. Its products must be delivered in a timely manner and be in a form that enables rapid review and absorption.
The list of controllable factors also include persuasion. As R. V. Jones (quoted by Handel) observes, “The test of good intelligence service is not merely that you were right, it is that you persuaded your operational or research staff to take the correct measures”. Jones is not alone in stressing the importance of persuasion. Nevertheless, while persuasion should be used, one must do so with caution. Intelligence officials can try to persuade but should never present their argument as stronger than the collected evidence indicates.

- Relationship building

Good relationships between intelligence and decision makers are critical. As Kent writes, “There is no phase of the intelligence business which is more important than the proper relationship between intelligence itself and the people who use its product”. McLaughlin cautions that if the relationship between intelligence and policy makers “turns sour – if the policymaker does not feel the need for the analytic product – then there is no reason for doing analysis at all”. Unfortunately, productive relationships are neither common nor easy. Building and maintaining such relationships requires time, commitment and the sustained investment of trust. As Lacquer observes, the relationship between intelligence and decision makers should be based on trust, if not perfect personal chemistry. Trust is especially important if the analyst’s findings are likely to challenge the customer’s preconceptions. As Aclin observes:

This development of trust becomes all the more critical when the analysts are providing information or estimates that do not conform to the conventional wisdom or otherwise are contrary to the preferences or preconceived ideas of the strategists. In such cases, even a well-grounded and soundly-reasoned analysis may not be persuasive. The willingness of the strategists to accept contrary or inconvenient analyses will rely at least as much on their assessment of the credibility of the analyst as it will on the analysis itself [...] The facts are important, but so is the messenger.

The construction of these relationships is always context-dependent. What works and what doesn't depend on the people and institutions involved, as well as general circumstances. Something as simple as the personalities involved can determine whether things “click”. And while character and authority matter, so too do such elements as organisational culture, the frequency of face-to-face communications and so on. Analysts with direct access to their customers can better understand their interests, objectives, priorities, assumptions and biases. Such interactions are critical to determining what conditions their thinking, the gaps in their knowledge, and how best to inform their judgements on an issue. The customer, in turn, can better understand the sources of uncertainty and the limitations that condition the collection and analysis of intelligence. As Gentry observes:

Many sources indicate that [...] trust is usually the result of continuing personal analyst–consumer relationships that build a mutual trust that, from consumers’ perspectives, normally means that they believe analysts have substantive expertise, display good judgment, and are trustworthy.

Unfortunately, such interactions between intelligence professionals and decision makers do not always occur. If there are no personal interactions, trust is invested in the “brand” of a particular unit or organisation. As Hatch writes, “Thus, by always being rigorous in tradecraft, persuasively presenting assessments, and managing relations with our consumers, we demonstrate the marks of reliability [...] To achieve success we must actively manage our corporate brand”. Katherine and Randolph Pherson agree; “Your organisation’s “brand name” can determine the weight your customers give to your products. Just like we develop preferences for credible service providers, information sources, and commercial products, customers pay more attention the products they believe are more thoughtful, reliable, and accurate”.
Johnson notes that the "producer-consumer relationship can be as fragile and unpredictable as it is important". The management of these relationships brings to mind the threat of politicisation. Politicisation typically involves an attempt to manipulate intelligence products so that they reflect one's subjective agenda. As Rovner explains, decision makers engage in politicisation when they seek – indirectly or directly – to force intelligence to alter its conclusions in a way that is "politically convenient or psychologically comforting". Intelligence professionals, in turn, "are guilty of politicization if they shape their estimates to reflect their own beliefs and preferences".

The threat of politicisation, and the consensus view that intelligence should be neutral, has prompted a lengthy debate over the appropriate nature of intelligence–customer relationships. Traditional, security-centred models of intelligence offer two perspectives here. These perspectives go by different terms: the "realist" vs. "professional" views, the "traditionalist" vs. "activist" views, or the "Kent" vs. "Gates" models. These views represent the dichotomy between those who advocate closer relations, and those who insist on a strict separation between analysts and decision makers. As Marrin explains, traditionalists “have a more limited conception of the role of intelligence and prefer distance over closeness”. Activists, in turn, “have a more expansive conception of the role of intelligence and prefer closeness over distance”. In other words, traditionalists perceive closeness as a threat to neutrality and objectivity. Activists, meanwhile, recognise the potential dangers associated with closeness but they are ready to compromise and reduce this distance because they believe that closeness is necessary to maintaining relevance.

"How close is ‘close enough,’ and how close is ‘too close’?”, asks Fingar. According to Aclin, the relationship between intelligence and its consumers should be “close enough for the analysts to understand the information requirements of the strategists and provide timely, relevant analysis, yet distant enough to avoid losing objectivity”. Fingar himself writes that “It is imperative that analysts be sufficiently close to their customers to understand their needs and gain their trust”. Precisely how close the relationship should be, according to Fingar, depends on “the personalities involved, their awareness of the role that each plays [...] and the professionalism of the analyst".

The professionalism of the analyst, coupled with strict organisational standards of analytic integrity, are especially important. As Kovacs and Schulsky observe, politicisation can occur even when intelligence is separated from its customers. Kovacs writes that “Intelligence staffs, even when kept in splendid isolation, will still tend to tailor their views to what they think decision makers' views are, or to the views of their superiors in the intelligence organization”. He stresses that “What is really needed to ensure integrity is a high level of professionalism, combined with high standards of intellectual integrity generated by education, and nurtured by the ambient culture of the organization".

Proper tradecraft is no less important. While we cannot remove bias, we can try to minimise it. As Betts notes, “Bias can be minimised [...] by enforcing rigorous standards of evidence and comparison.” Here, Betts means replacing a consensus-based, uniform judgment with the transparent and systematic presentation of relevant, alternative views.

Traditionalists also emphasise the importance of objective analysis. However, objective analysis cannot compensate for the irrelevance that tends to result from poor relations between analysts and customers.

Relevance, which is key to utility, increases when intelligence closely interacts with decision makers. As Berkowitz and Goodman explain, “The best way to ensure that an intelligence product meets the needs of the consumer is to put the consumer in touch with the analysts preparing the product. Thus, the process should constantly operate so as to minimise the distance between intelligence producers and intelligence consumers, permitting enough interaction so that the product is naturally tailored to the needs of the consumer". In other words, there may be a trade-off between relevance and quality. As Marrin writes, “Specifically, the proximity hypothesis suggests that greater distance between intelligence and policy produces a more accurate but less influential product whereas greater closeness leads to increased influence but decreased accuracy".

Despite this, it is difficult to side with the advocates of distance. Some degree of politicisation is likely unavoidable regardless of how distant analysts and decision makers are. Strict separation and objectivity hinders the implementation of those practices that ensure relevance and let intelligence to
 fulfil its core mission. Irrelevance also means there is no audience to listen to intelligence, and this makes intelligence worthless. As Rovner observes, “the fear of politicization [may be] much more dangerous than politicisation itself”. According to Medina:

> Being completely neutral and independent ... may only gain us irrelevance. We need, of course, integrity in our analysis - we must be willing to say things that are uncomfortable .... and that are not compatible with the goals of policymakers. But we should not pretend that integrity and neutrality are the same thing or that they are dependent on each other. Neutrality implies distance from the customer and some near mystical ability to parse the truth completely free from bias or prejudice. Integrity, on the other hand, rests on professional standards and the willingness to provide the most complete answer to the customer's question, even if it is not the answer he wants to hear. Neutrality cannot be used to justify analytic celibacy and disengagement from the customer. If forced to choose between analytic detachment and impact on policymaking, the 21st century analyst must choose the latter.

**Mutuality**

Mutuality refers to the exchange of information, knowledge and experience for mutual benefit. Mutual understanding and coproduction present two aspects of effective mutuality. The relationship between intelligence and customers should be based on such understanding. As Steinberg writes, “Helping each side understand the other’s needs, capabilities, and limitations is critical to assuring that intelligence analysis can play its rightful, important place in policymaking”. Intelligence professionals must understand the process of decision making while decision makers must understand the process of intelligence. Doing so is the only way to promote realistic dialogue and ensure that mutual expectations are neither unrealistic nor too low. As Sims writes:

> Because information must be tailored to consumer needs, the process is correctly thought of as more two-way than unidirectional. The intelligence analyst should understand the needs, perspectives, and working constraints of the consumer, including the types of contingencies he faces .... The decision maker, in turn, must understand the limits of knowledge on which the intelligence is based, and factor them into a realistic assessment of the intelligence received.

One must recall that decision makers may have insights that are no less valuable than the ones offered by intelligence. Indeed, they often enjoy access to privileged information. For example, it is not unusual for customers to personally know the very individuals intelligence professionals comment on without having met them. Further, decision makers may better understand the context in which certain issues play out. On occasion, they are better analysts than analysts themselves. It is important to try and capitalise on the decision makers' access, knowledge and experience. This is especially important if decision makers have insider knowledge. To do so, one must replace the traditional one-way flow of information with a two-way exchange between analysts and customers. We call this collaborative arrangement "coproduction".

> “Improving analysis requires putting consumers at the centre of the process”, writes Treverton. Coproduction gives this statement new meaning as decision makers become active contributors to the analytic process. This is not unprecedented. Synergistic relationships often exist in the military. In the US, during the Nixon, Ford, and Carter Administration, intelligence was successfully merged with policy perspectives in the reports prepared by the US National Security Council Staff. Collaboration between intelligence and decision makers is also a common feature in the UK’s intelligence community.

Not surprisingly, the number of voices advocating similar arrangement have grown in recent years. Back in 2008, Steinberg called for the creation of “cross-cultural” communities that would bring
together analysts and policymakers working side-by-side. Doing so would help them overcome the cultural differences between intelligence and decision making. And at the start of this year, Stephen Marrin concluded that the institutionalisation of “mechanisms for the integration of both intelligence and policy perspectives in mutual assessments” is one of the main ways we could improve “the potential influence of intelligence analysis on decision-making”.

Such recommendations will doubtless prove controversial. Whether and to what extent decision makers can engage in the intelligence process is a matter of continued debate. It is feared that including the insights of decision makers will “taint” the intelligence product. This brings us back to the dilemma of bias and irrelevance mentioned above. Coproduction increases relevance but may bias intelligence. On the other hand, as Jervis observes, “Intelligence is [...] easier to keep pure when it is irrelevant”. There are no simple solutions here, especially as our knowledge of the complex dynamics of politicisation remains limited. However, what we do know is that relevance is key. We also know that more synergistic relationships between intelligence and decision makers are possible and can be effective.

- **Process Optimisation**

Process optimisation involves continuous improvement and innovation. Intelligence is a process and, like every process, it should be regularly assessed and improved. Mechanisms for evaluation and improvement are traditionally included in intelligence work and are grouped under “feedback”. Much attention is also paid to learning from failure and increasingly - from successes. A lot has been said about failures in intelligence. One can forget that studying successes is no less (and occasionally more) valuable still. The study of successes allows us to identify the “best practices” we wish to reuse in the future. And while some lament the search for best practices, such criticisms are often a failure of their own efforts to implement them. Other approaches to process optimisation include those methods commonly associated with the Japanese philosophy of *kaizen*, or gradual improvement. Intelligence has much to gain from innovation. Indeed, no facet of intelligence is immune to it. As Nicander explains, “innovation [...] is a process of fine-tuning the system in order to meet evolving or anticipated challenges”. Gardiner adds that innovation can result in the development of “new means and forms to convey analysis to policy-makers in a way that fits in with their preferred methods of perceiving and thinking”, and that doing so can “reduce the impact of personality differences between policy-makers and analysts”.

### 3.3 Optimising Thinking, Decision Making and Action

Assuming they have the required access, analysts should work toward optimising the customer’s thinking, decision making and action. This can be done by helping the customer with the following activities:

- **Achieving situational awareness**

According to Omand, "building situational awareness" is "the first use [of intelligence], and by far the greatest in terms of volume of effort involved". Intelligence provides the context needed by decision makers to understand developments and inform their judgements. To this end, a good intelligence product provides description alongside explanation and / or interpretation. As Petersen notes, "intelligence analysis starts when we stop reporting ... and start explaining". Interpretation takes explanation one step further by elaborating on the “So what?” of the issue. Good intelligence therefore broadens the decisions maker’s understanding, providing a basis for further enquiry or informed judgement. It should also oblige them to think beyond their immediate constellation of interests and stakeholders. Situational awareness is also enhanced by focusing the decision maker’s attention on the most pertinent facts. Quoting Gookins, “while information is anything that can be known, intelligence is a refined subset that responds to specific ... requirements and stated needs”.
• Understanding possible futures

"[I]ntelligence needs to [...] answer immediate questions and open space for longer term thinking," writes Treverton.\textsuperscript{102} In other words, it is expected to convey not only “knowledge” but also “foreknowledge”.\textsuperscript{103} It should help decision makers anticipate future developments while also alerting them to potential impacts.\textsuperscript{104} Such awareness is often considered the principal value-added of intelligence.\textsuperscript{105} Analysts involved in futures intelligence outline multiple scenarios instead of fixating on a specific outcome. As Fingar explains:

Rather than telling policy makers, 'This is what will happen, so you better prepare for that outcome,' strategic analysis treats the future as neither inevitable nor immutable. The goal is to identify the most important streams of developments, how they interact, where they seem to be headed, what drives the process, and what signs might indicate a change of trajectory.\textsuperscript{106}

Futures intelligence is never easy to produce, nor is it easy to use. Omand notes that predictive or estimative assessments are “potentially the most valuable” but also “the most fraught”.\textsuperscript{107} And while intelligence professionals often assign great value to such products, decision makers are less enamoured of their contents. To quote Hulnick, “Unless policy officials are educated about the estimate process itself, they may consider these products as merely another [and not the most interesting] bit of the flow of intelligence reaching their desks”.\textsuperscript{108}

• Receive warning

Warning is another task fundamental to intelligence work.\textsuperscript{109} Indeed, many consider warning to be the "primary function of intelligence".\textsuperscript{110} Quoting Betts, “Ultimately, most intelligence is directed at some sort of warning”\textsuperscript{111}. Elsewhere, Gill and Phythian argue that “If intelligence is worth having, it is because analysis will provide customers with prior warnings of potential developments (that is, potential surprises)”.\textsuperscript{112} Warning aimed at avoiding strategic surprise is considered especially important.\textsuperscript{113} Davis explains that while tactical warning “focuses on specific incidents”, strategic warning informs analytic perception and the effective communication of changes in the nature or impact of specific threats.\textsuperscript{114} In other words, strategic warning enables preparation. Properly executed, it allows the decision maker to orient their resources and "to succeed despite surprise".\textsuperscript{115}

• Understanding available courses of action

Woodard argues:

[A]nalysts must stop thinking about themselves as purely scientific information providers and realize that policymakers need more than just the facts. They need anything that can ethically provide them with decision advantage. Rather than just telling policymakers what the problems are, analysts need to go one step further and tell their consumers what they can do about them.\textsuperscript{116}

Intelligence analysts are rarely encouraged to offer policy prescriptions. Some argue that doing so blurs the line between analysis and decision making, deprives intelligence of its objectivity, and risks politicising the entire process. Such views are especially popular in the field of national security. They are less pronounced in the fields of law enforcement and competitive intelligence. Indeed, for many competitive intelligence practitioners, recommendations are a must-have.\textsuperscript{117}

National security is slowly coming around to the same point of view. Woodard argues that the value of intelligence is diminished unless products include policy recommendations.\textsuperscript{118} Our own experience of working with analysis in the national security domain has us second this notion.
Intelligence can and should assist decision makers with understanding and testing different courses-of-action.119 As Fingar observes, thanks to their “expertise and experience” intelligence analysts are often in a better position to identify key opportunities than the decision makers they support.120 Yet, while intelligence can identify options, assess implications, discuss potential consequences, and highlight relevant historical analogies, it should not advocate or dictate policy. As Lowenthal stresses, "Intelligence does not exist to provide definitive answers or [...] to point to the winning or losing policy choices”.121 Davis agrees, “[I]t is the realm of the strategist to decide which levers to pull in what sequence. Intelligence analysts will have crossed the line into politicization if they take part in the debate to decide which options are best”.122

• Managing uncertainty

Intelligence should help a decision maker manage their uncertainty. Wheaton and Beerbower argue that the purpose of intelligence is to “reduce the level of uncertainty for a decision maker”.123 Many agree with this argument.124 But others note that intelligence can also have the opposite effect.125 According to Hulnick, intelligence can increase uncertainty as it “discovers alternative possibilities policy makers either had not thought about or had dismissed”.126 Jervis agrees, arguing that intelligence “is likely to introduce or magnify uncertainty by bringing in hedges and qualifications”.127 More controversially, Marrin argues this is exactly the outcome analysts should aim for. The purpose of analysis, he writes, is “to increase decision-maker uncertainty rather than reduce it”.128 This is not an easy argument to make. If intelligence increases uncertainty, what is its added value? In terms of outcomes, intelligence can help decision makers evaluate their uncertainty, understand its nature and degree, and calibrate themselves accordingly.129 Doing so might typically involve an assessment of probability, of analytic confidence, or of the reliability of one’s sources. Intelligence can also be used to assess the probability of deception. All this can help the decision maker bound their uncertainty130 and determine an appropriate coping strategy.

• Expertise

Intelligence supplies the expertise that decision makers need but often lack.131 For example, intelligence can help decision makers understand the cultural and historical contexts they should be sensitive too.132 Its inputs are also likely to inform technical or non-traditional issues.133 In general, there are three types of expertise that intelligence analysts should offer to decision makers: substantive expertise, disciplinary expertise and process-oriented expertise.134 Substantive expertise encompasses everything the analyst has to know to provide descriptive, explanatory, interpretative, and estimative analysis. Disciplinary expertise provides the theoretical knowledge needed to analyse substantive information. Finally, process-oriented expertise is concerned with analytic tradecraft.

One perspective on the function of intelligence stresses the complementary relationship between generalists and specialists. Decision makers tend to be generalists.135 Intelligence professionals, by contrast, are often specialists in one or more subjects. Accordingly, as Betts notes:

As generalists, competent policymakers can make better sense of the relationships between pieces of data in widely different subject areas. But precisely because they are generalists, they also are less sensitive to the particularities, intricacies, and ambiguities of specific problems. Raw data mean nothing out of context, and whereas leaders may understand the context of the big picture, they are less likely to grasp the context of the little picture. Hard facts without interpretation by specialists thus may lead high-level decision makers astray.136

The generalist-specialist view presented above is questioned, however, in the most recent paper written by Stephen Marrin.137 Marrin argues that decision makers are often specialists of their own making. Over the course of their careers they accumulate a vast amount of expertise on the issues they deal with. In light of this, to not appear irrelevant, intelligence should provide expertise that decision
maker would “have difficulty acquiring on his or her own”. In other words, as Marrin explains, “the place to start understanding the impact that intelligence analysis has on a decision is not with the intelligence available or the analysis of it, but rather the decision-makers understandings of what is happening, why it is happening, and what they are planning to do about it”. The decision maker’s knowledge becomes the benchmark the intelligence process can use to determine where to provide value added. According to Marrin, “Whether that unique value added consists of history, language, culture, or some other kind of contribution depends on the nature of the question asked and the informational requirement of the policy-maker”.

- **Awareness and appreciation of emerging issues and trends**

Intelligence should bring to the decision maker’s attention those issues and trends that are likely to have a significant impact. This might include events that do not conform to a pattern, as well as “low probability, high impact” occurrences. Indeed, emerging issues may point toward valuable opportunities that need to be seized early. They may also be neutral, which means their precise meaning will need to be deliberated. Regardless of the nature of an issue, building awareness can be challenging, particularly if the decision maker is already grappling with the issues that inform the headlines. Analysts must find ways to convince their customers of the relative merits of an issue, and then to focus their attention on its long-term implications.

- **Critical thinking**

Good intelligence encourages critical thinking. According to Hunter, who quotes Robert Ennis, "critical thinking is reasonable, reflective thinking that is aimed at deciding what to believe or what to do". Intelligence products should challenge the decision makers' reasoning. In particular, they should aid the identification of weak assumptions, erroneous beliefs and misconceptions. As Fingar notes, "Prompting decision makers to rethink their own assumptions and preliminary judgments may be more beneficial than providing definitive answers to specific questions". Intelligence can also help decision makers identify those biases that may affect their reasoning or the reasoning of others (e.g. their opponents). Finally, critical thinking involves asking the right questions. Analysts should identify and answer those questions that have not been asked by their customers. Meanwhile, customers should be prompted to ask new questions in light of the intelligence they receive. This reciprocal exchange can be used to build trust and confidence.

- **Diversified views**

Intelligence provides decision makers with a "second opinion". The insights generated by analysts should be independent and not tainted by the decision maker’s policy interests. As such, decision makers can compare their own views with those offered by others. Decision makers are often committed to policies or actions they wish to undertake. This commitment may be so strong that they are blind to the obstacles that stand in their way. Intelligence can identify the problems that decision makers themselves fail to notice. As Marrin writes, "independent and objective intelligence analysis" can "improve policy by preventing decision-makers from fooling themselves into believing that their policies are or will be successful when more pessimistic indicators exist".

Unfortunately, decision makers may ignore intelligence that contradicts what they think or plan to do. Experienced analysts offer remedy to such situation. They must be proficient subject-matter experts while also being able to manage their customer. Quoting Odom, “First-rate analysts can get that information and present it, whether or not it is welcomed by users. To be effective at this, however, they need to know a great deal about the policy-making process or … operations conducted by their organization”.

Intelligence has much to offer. For example, its insights are usually based on an all-source collection strategy, offering clues from multiple sources. This is likely to lead to a more complete and accurate picture of a situation. Novel sources and collection methods are an important source of value-
added. This data can be subjected to structured analysis. The use of such techniques as the Analysis of Competing Hypotheses, Scenario Planning, Red Teaming, etc., is especially important as they can help the analyst identify additional perspectives to present to decision makers.

Intelligence products that present more than one perspective should be carefully crafted. It is not unusual for decision makers to become confused and dismiss multiple viewpoints as “pure cacophony.” Alternatively, they can "cherry-pick the ones they prefer" and ignore the rest. Alternative or contrasting views should be presented in a way that is clear, easy to digest, and offers insights that the decision maker can use when they decide to act.

- Structuration

Good intelligence helps decision makers think conceptually. It allows them to dissect, model and understand complex realities, and to identify those issues that warrant closer attention or action. Indeed, one of the most important outcomes of intelligence is the ability to form one’s own picture of an issue. As Omand writes, "Intelligence ... can be used to build an explanatory theory of past and present" that decision makers can use as they try to make sense of the faced situations. Such theories can also be used to think through possible futures, anticipate possible policy responses and communicate more effectively with others.

- Prioritisation

Decision makers are busy and their attention is often fragmented. Intelligence should help them focus on the right things. As Randolph and Kathrine Pherson explain, “They depend on you to prioritise what is important. Your selection of topics helps your customers manage their time and focus their intellectual energies on what is most critical.” But to have an impact, it is not sufficient for intelligence to single out what is most relevant. Its findings must also be presented in a way that makes them easy to use by a decision maker. As Randolph and Kathrine Phersons go on to argue:

Their time is limited and precious. Your senior customers might be given a hundred pages of information to read each morning. You should expect them to move quickly through volumes, keying off words that catch their attention and interest. Your products should be focused and easily digestible with a prominent 'so what' that points them to the implications and options for decisions they will make.

- Appropriate language

The impact of intelligence on language we use is rarely discussed but potentially very important. Intelligence should help decision makers choose the appropriate language to frame and communicate the issues on their agenda. Michael Hayden offers a good example of this in his memoir by describing the controversy connected with classifying the conflict in Iraq as a “civil war”:

We debated how the label of civil war would help the president. 'If we think it, isn’t it our responsibility to say it?’ [the analysts] asked. Besides, the new description could lead to alternative courses of action.

Choice of language can have profound implications, and not just in understanding. As well as shape the way one thinks about an issue, word use can inform the scope of one’s actions and application of national or international law.

These are the outcomes that impact thinking, decision making and action. They have been integrated into the Intelligence Analysis Impact Model which we present below.
4. The Intelligence Analysis Impact Model

4.1 Description

The research above has been combined with our practical experience as instructors and advisors to intelligence units in both the public and private sector. It has prompted us to develop the Intelligence Analysis Impact Model presented in Figure 2 below. The Model was developed over a series of steps. To begin, we invited analysts to clarify the impact they hoped to have on their customers. In a similar vein, we invited customers to elaborate on what they hoped to receive from the analysts they worked with. This process helped us define the impacts outlined above - optimal access and optimised thinking, decision making and action. We then worked backward to define those outcomes most likely to contribute to these impacts.

The resulting model consists of two sets of outcomes and two sets of impacts. The outermost wheel lists the outcomes detailed in Section 3.2. For example, process optimisation is one of the six outcomes that enable optimal access and this, in turn, allows intelligence to work toward the 12 higher level outcomes detailed in Section 3.3. These enable the final set of impacts, namely better thinking, decision making and action. Viewed systemically, we contend that the effectiveness of any intelligence process may be undermined unless all 18 outcomes are properly pursued.
As noted above, the model reflects our experience working with analytic teams around the globe. Almost every team lamented either a) their lack of access to their customers, or b) the reluctance or inability of their customers to think, decide and act on the intelligence provided. In some cases, the teams complained of both problems. This model represents the first attempt to clarify what we think is needed to fix these problems. It is also an attempt to synthesise the literature on the topic.

The model focuses exclusively on outcomes and impacts; inputs, activities and outputs are beyond the scope of our work. We believe that to get the process of intelligence right, one should work backward from the outcomes and impacts one hopes to achieve.

We also stress that when talking about impacts we refer exclusively to those “internal” to the organisation or the analyst-consumer dynamic. We are not concerned with the impacts decision makers hope to have on the wider world (e.g. with regard to economic policy, global security, the building of alliances, etc.). Such impacts are “external” to the business of intelligence. Intelligence supports decision making and action taking but it does not make decisions or take actions. 157

There are other things, of course, that intelligence does not, should not or cannot do. This includes:

- Provide objective truth. To quote Lowenthal, “Intelligence is not about truth. If something were known to be true, states would not need intelligence agencies to collect the information and analyse it. Truth is such an absolute term that it sets a standard that intelligence rarely would be able to achieve. It is better - and more accurate - to think of intelligence as proximate reality … [Intelligence agencies] can rarely be assured that even their best and most considered analysis is true. Their goals are intelligence products that are reliable, unbiased, and honest (that is, free from politicisation)”. 158
- Ensure accuracy. 159 Intelligence is intended to addresses complex and ambiguous realities. It can never achieve complete accuracy. Unknowns, erroneous assumptions, misconceptions, etc. are inevitable.
- Provide certainty. 160 If intelligence cannot ensure accuracy, it follows that it cannot provide absolute certainty. No matter how good one’s intelligence may be, there is always some degree of residual uncertainty.
- Eliminate surprise. As Lowenthal stresses, “[W]e have to accept […] the inevitability of surprise… When surprise happens, we have to approach the necessary post-mortem with reasonable standards as to whether it was ‘knowable’ or not. As many others have written, there is a vast difference between secrets and mysteries. Intelligence exists to penetrate secrets, not to solve mysteries. Many surprises – but not all – are mysteries.” 161

4.2 The Utility of the Impact Model

Our intention is to develop a tool that can be used by different organisations and professionals, as well as different intelligence disciplines. To what ends can it be applied?

First, we hope the model is used to reframe the discussion on value. Clearly, developing and distributing intelligence products is no longer enough. Analysts are eager to develop better relationships with their customers so that they can tailor their efforts accordingly. Of course, this is easier said than done and requires the development of a new type of analyst – one who is as competent in relationship and process management as they are expert in the issues they are paid to grapple with.

Assuming the customer’s requirements are clear, the model can be used to determine the appropriate mix of inputs, activities, and outputs needed to realise these outcomes. Thus, if better situational awareness is needed, what policies and processes should an analyst put in place to achieve this end? If we hope to improve warning, how do we strengthen those relationships that oblige one individual to give their undivided attention to another? How can coproduction be used to help the decision maker frame and manage their uncertainty? There are no one-size-fits-all approaches here. Different organisations have access to different resources. The model’s value is in providing a tool with which to organise one’s thinking. Further, the model can be used:
• As a diagnostic tool to evaluate the overall intelligence process and identify possible improvements
• To improve specific dissemination strategies
• To anticipate potential points of failure in the organisations policies and processes
• As a tool to benchmark how different intelligence units pursue common outcomes
• As a training aid to describe what intelligence does to those unfamiliar with intelligence work
• To identify the skills and knowledge needed by analysts, and to use these insights to develop more effective intelligence curricula

This last endeavour is described in more details in the case study below.

5. The Impact Model in Practice: The VALCRI Syllabus Development

5.1 About the VALCRI Project

Our most recent research on the impact model took place under the umbrella of the EU-funded VALCRI project (see www.valcri.org). The project, led by Middlesex University is intended to enhance criminal intelligence analysis through a suite of advanced data processing, analytic and sensemaking tools. It is acknowledged that technology alone will not fix this challenge. Rather, the technology works best when it is sensitive to the analyst’s contextual circumstances and augments, not attempts to substitute their cognitive abilities. The project’s objective is not just to provide better technical tools, but also the cognitive tools needed to perform across all five domains of intelligence work (taken together these domains are referred to as the Five Architectures of Intelligence):

• The organisational domain - activities pertaining to an organisation’s mission, objectives, etc.
• The operational domain - activities pertaining to the execution of orders, policies, projects, etc.
• The informational domain - activities pertaining to the use and management of information
• The technological domain - activities pertaining to the use and management of IT
• The cognitive domain - activities pertaining to the cognitive dimensions of analytic work

5.2 About the VALCRI Syllabus

VALCRI is unique in acknowledging that technology works best when it augments the analyst’s cognitive abilities and contextual circumstances. In light of this, the VALCRI project has developed an extensive syllabus for the training and development of criminal intelligence professionals. This syllabus reflects the project’s objective of giving analysts a better toolkit, as well as the knowledge needed to operate across the five domains listed above. When complete, it will cover not just the use of the VALCRI system and its individual components, but also those disciplines that enhance the analytic capabilities of individuals and organisations alike. Further, the syllabus is intended to serve as a reference document for European law enforcement agencies looking to improve their training efforts outside of the VALCRI project.

The current version of the syllabus has eight sections, each designed to increase the student’s value added:

1. Introduction to Analysis – This section provides a concise introduction to analytic work. Emphasis is given to the contextual factors that inform the analytic process and its outcomes.
2. The Analytic Process – This section focuses on analytic theory and the application of structured analytic techniques. Students will also be introduced to supplementary topics, such as productivity, time and work management, information management, etc. The section also covers those analytic disciplines that are rarely taught to criminal intelligence professionals, including future analysis, risk analysis, and early warning.
3. Data Visualisation and Visualisation-Based Analysis – This section examines how to visualise data to support analytic reasoning, pattern detection, and insight generation. Emphasis is given to many different types of visualisation and how they can be achieved using different tools.

4. Thinking and Reasoning Skills – This section provides a detailed overview of the cognitive mechanisms that support effective reasoning and data-driven action. Our objective here is to give analysts a comprehensive set of tools to support decision-making, problem solving, idea generation, and learning.

5. Managing the Analytic Function – This section addresses those disciplines that enable the management and coordination of analytic teams. These include: networking and collaboration, information management, project management, change management, leadership, continuous improvement, strategy and strategic thinking, etc.

6. Knowledge Management – This section covers the fundamental principles of personal and organisational knowledge management. Emphasis here is given to how best to capture, codify and share the know-what and know-how that enable effective intelligence work.

7. Legal, Ethical and Privacy Issues – This section embraces the legal, ethical, and privacy-related issues that inform law enforcement and analytic work in general.

8. Online Research and Investigative Skills – This final section provide guidance on the collection of open source information for investigative or intelligence purposes.

Each section is divided into separate units. For each unit we specified:

- Key learning objectives
- Planned activities and exercises
- An evaluation method
- Required readings
- Supplementary readings
- Online learning resources (where applicable)

The VALCRI syllabus has been in development over the past two years. This has been a multi-stage endeavour involving:

- Multiple reviews, including from the project’s end users and other security and law enforcement professionals. Successive versions of the syllabus have built on the comments and suggestions of these practitioners to provide what we believe is the most extensive index of training modules currently available.
- A careful review of the literature on criminal intelligence, intelligence analysis, human cognition, process and project management, collaboration, leadership, communication, knowledge management, information management, strategy and strategic thinking, operational management, productivity, etc. This review sought to identify the most important skills and disciplines needed by analysts in general and criminal intelligence analysts in particular. Particular emphasis was given to those disciplines that are rarely (if ever) taught to analysts, but whose relevance to analytic work cannot be denied, and can be readily adapted to meet the needs of law enforcement professionals.
- A review of training standards developed by various bodies, as well as training curricula offered by public and private sector organisations. Our survey was not limited to the discipline of criminal intelligence but included other intelligence disciplines such as national security intelligence, military intelligence, business intelligence and so on.
- A survey of the literature on adult learning for recommendations on how best to educate career analysts. We examined the state-of-the-art and developed an approach that we believe blends the practical and theoretical with training and education.

The Intelligence Analysis Impact Model grew out of these efforts, providing a conceptual framework with which to organise and test our ideas on which skills and disciplines to include in the syllabus.
5.4 The Intelligence Analysis Impact Model and the Development of the VALCRI Syllabus

The use of Intelligence Analysis Impact Model influenced the development of VALCRI syllabus in three ways. To begin, we developed a methodology to help analysts evaluate their current approach to intelligence (this methodology is included as a learning module in the VALCRI syllabus). Next, we identified the skills needed by analysts to achieve the outcomes and impacts described above. These are detailed in the tables below. Finally, the model shifted the focus of our teaching from monodisciplinary approaches to collection, analysis and decision making, to holistic approaches dedicated to achieving specific outcomes. The evidence suggests that this latter approach is more conducive to the development of professional competencies, with analysts claiming their ability to generate value – whether for their organisation or their customers – has increased significantly.

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<tr>
<th>Impact: Optimal Access</th>
<th>Reach</th>
<th>Captivation</th>
<th>Acceptance</th>
<th>Relationship building</th>
<th>Mutuality</th>
<th>Process Optimisation</th>
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<tr>
<td>To achieve the outcomes above, analysts should know how to...</td>
<td>Identify key customers</td>
<td>Provide a variety of intelligence products</td>
<td>Ensure timeliness and relevance</td>
<td>Implement different dissemination strategies</td>
<td>Evaluate and improve the effectiveness of dissemination</td>
<td>Deal with obstacles to effective dissemination</td>
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<tr>
<td>Identify the customers' needs and wants</td>
<td>Understand the customer’s operating environment and use this understanding to provide a more meaningful product</td>
<td>Understand the customer’s personality, and their learning, cognitive, and decision making styles, and use this to generate more meaningful products</td>
<td>Understand what other information sources customers access and use. Identify ways in which intelligence can offer superior value</td>
<td>Assess the analytic capabilities of the decision maker and use this knowledge to offer relevant analytic products</td>
<td>Offer objective, timely, and easily digestible information and analysis</td>
<td>Adapt their communication style to suit different circumstances</td>
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Use design and other approaches to develop a product that captures and holds the customer’s interest and attention

Obey professional ethics and maintain professional integrity

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<th>Impact: Optimising Thinking, Decision Making and Action</th>
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<td><strong>Receive warning</strong></td>
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<td>To achieve the outcomes above, analysts should know how to...</td>
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<td>Provide warning intelligence</td>
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<td>Develop Early Warning Systems (EWS)</td>
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<td>Enable and support early action</td>
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<th>Impact: Optimising Thinking, Decision Making and Action</th>
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<tr>
<td><strong>Diversified views</strong></td>
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<td>To achieve the outcomes above, analysts should know how to...</td>
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<tr>
<td>Apply structured analysis aimed at the consideration of multiple alternative hypothesis, scenarios, viewpoints, etc.</td>
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6. Conclusions and Next Steps

The Intelligence Analysis Impact Model is a work in progress. It is presented here as a “minimum viable product” that we hope will prompt successive rounds of feedback and consultation. That said, the model has already been used to support our training and capacity building projects around the globe. Most recently, the model informed our work on the Global Crisis Response Support Program (GCRSP), a two-year project aimed at improving the crisis management capabilities of analysts in the Americas and the Caribbean. Using the results chain above, we identified the impacts and outcomes we hoped to achieve, and then the inputs, activities and outputs needed to do so.

Taken together, the results chain and impact model have helped us shed new light on the range of skills needed by analysts to operate effectively. Outcomes are often spoken of in abstract terms. No one would dispute that warning is important, but how do we ensure that those tasked with providing it do so effectively? The Intelligence Analysis Impact Model has given us a framework with which to a) identify these skills and b) develop the curricula needed to cultivate them in others. And while some skills are well known (e.g. the ability to conduct structured analysis), others (managing continuous process improvement) are not commonly associated with analytic tradecraft.

In light of this, we contend that the model’s real value lies in its ability to foster a holistic approach to the training of intelligence analysts. Our focus should no longer be on helping analysts generate better outputs (however well-intentioned this effort might be). Rather, we should give them the skills they need to generate more ambitious results still. To this end, any comments and criticisms of the model presented above are welcomed by the authors.
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