ESSAY

BARKING UP THE RIGHT TREE
HOW TO IDENTIFY LEARNING POINTS IN CRIMINAL INVESTIGATIONS USING A METHODOLOGY BASED UPON A FIFTY-YEAR OLD DIAGRAMMING TECHNIQUE

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Increasingly there is recognition of a need for a systematic approach in assessing police performance. The main reasons include the following:

1. Evaluations make it possible to learn from both mistakes made and successes, to identify the circumstances under which people and resources can be deployed optimally and to confirm the value of resources and methods successfully employed;

2. Knowledge and insights acquired from evaluations can be exchanged with other investigation agencies or sections of the organization in question, and;

3. Evaluations provide the opportunity to explain choices made, expectations raised and risks taken. In addition, expenditure in terms of people, resources, money and time can be explained.

Standardization of the evaluation process through a methodical approach, makes for interchangeability and disambiguity of results. These in turn are prerequisites for the much needed standardization in investigation processes, and the accumulation of true knowledge and understanding of all issues relevant to their successful completion. Being able to reuse the knowledge and experience thus acquired will improve the quality of the investigation process, providing for quicker, less fault prone investigational activities at lower costs. This generates a multiplier effect: not only doing things right, but doing the right things better: Making more sensible, efficient, and effective use of scarce means, overcharged staff and diminishing budgets.

1 Statements of fact and opinion are those of the authors, and not of the organizations they are working for
Out of the structured evaluation methodologies for police practice that have been developed over the years, is the one inspired by the original MORT (Management Oversight and Risk Tree) methodology, described here, potentially one of the most profound, for reasons outlined in this article. The quarry of the evaluator, i.e. leads to improvement in current or future projects, is hiding in the branches of the tree, to be found through skillful application of this methodology.

**Generally more than one event in need of explanation**

Fueled by experience from a number of acquittals caused by defective investigations and even some cases in which innocent individuals were wrongly prosecuted and sentenced, and in response to the findings of a high profile inquiry into all circumstances that had led to the wrongful conviction of an innocent suspect of the murder of a ten year old girl, the Dutch police has, as one measure to improve the quality of criminal investigations, in 2005 introduced a Master of Criminal Investigation program at the Dutch Police Academy, open to experienced investigators and new recruits with university educations or relevant professional backgrounds from outside law enforcement. The subject of how to perform evaluations of police activities is part of this additional two-year training that is preparing the students to be employed as investigation specialists. The evaluation methodology presented in this training is one that is loosely based on the MORT methodology, originally developed in the late 1960s on behalf of the US Energy Research and Development Administration by W.G Johnson and his team, but in the late 1990s significantly modified by the authors to be used in evaluations in a law enforcement environment.

A central element on this MORT inspired evaluation methodology is that most incidents (failures, oversights, mistakes, misapprehensions) contain more than one event that requires explanation. Also that there are more sorts of causes than one, and that causes are often part of a causal factor chain. There are direct causes, root causes and contributing causes. From this it follows that evaluations of criminal investigations should not only cover the performance of individual investigators and carefully scrutinize their activities (the top of the iceberg that is visible to anyone), but also take a thorough look at other factors that in the background determine performance and results (the part of the iceberg that is hidden under the surface). These factors include the direction, facilitation and monitoring of investigations by management levels, applicable legislation and policies, and facts, events and circumstances outside the sphere of influence of the investigators.

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2 Commissie Posthumus, “Evaluatieonderzoek in de Schiedammer parkmoord” (Evaluation of the criminal investigation of the murder in a park in Schiedam), 2005

and their management, that nevertheless have an impact on what they can achieve.

An investigation carried out by experienced, knowledgeable and dedicated investigators for instance can go wrong, not because of incompetence, but bad management, forcing the investigation in wrong directions. It can also suffer from external factors on which no one can exert any influence, such as the weather that can destroy forensic evidence before it being captured. It is essential that in evaluations these kinds of possible root, contributing or even direct causes that have nothing to do with the performance or competences of the investigators involved will be identified, and get as much attention, to also produce learning points for current and future operations. This is a major difference from most other evaluation methodologies that primarily focus on performance of those who are most visible in the carrying out of investigations.

In the diagram, that looks like an inverted tree, there consequently are four branches, of which the ‘production’ and the ‘management’ branches investigate performance, and the ‘accepted risk’ and ‘external pressure’ branches investigate influential circumstances.

**Room for knowledge, expertise and creativity**

The "Tree" in the original MORT methodology refers to the logic diagram that was developed as a graphical index to the MORT user manuals\(^4\) in the late 1960s, in which a large amount of very detailed questions, specific for highly technical industrial environments, are listed that needed to be answered in an evaluation. The law enforcement version of the evaluation methodology inspired by MORT has adopted the logic diagram as a formal, disciplined logical decision tree to systematically relate and integrate both factors that can- and those that cannot be influenced in criminal investigations, but is primarily using it as a means to help developing relevant questions to be researched by the evaluator himself. The main reason for that is that a fixed set of questions does not do justice to the need for creativity to tailor the questions in ways to find the precise answers one is looking for in specific situations. Fixed questions are lacking the flexibility to adapt the evaluation to differing situations. Two investigations may be similar but they are seldom exactly the same and questions relevant to one investigation may be less so to another.

The MORT inspired evaluation methodology is a ten-step procedure to be followed by the evaluator, in which the diagramming technique is playing a pivotal role. The use of diagrams in an evaluation has a number of advantages. They:

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4 Such as for instance can be found at [http://nri.eu.com/archive.htm](http://nri.eu.com/archive.htm) (accessed 6 December 2011)
• support the logical thought process
• make interconnections visible
• help understanding the key factors that shape an issue
• steer evaluations in the direction of more deep-lying causes
• also make the evaluation process accessible to others and therefore less threatening
• help with the presentation and discussion of results of evaluations

The MORT inspired evaluation methodology starts with the formulation of the aim of the evaluation and ends with the presentation of the results in step ten. In the other steps the evaluator is using additional techniques also familiar to police analysts. These include Mind Mapping\(^5\) to explore the aspects that may be relevant to an evaluation before deciding on focusing on one or more particular subjects, and the use of information matrices to link the questions to be researched with information sources. The MORT diagramming technique is instrumental in systematically dissecting the chosen subject(s) in their component parts, and identifying the relevant questions to be answered in the actual evaluation research phase.

The sequence to follow in the application of this methodology is making the evaluation exercise very transparent. Stakeholders can at all times check whether all relevant aspects are being covered by having a look at the Mind Map from which choices have been made and judging the rigor of the MORT like diagram’s design. And they can appraise the thoroughness of the evaluation research by assessing the comprehensiveness of the information matrix. This transparency is also a safeguard against the lazy and malicious shaming and blaming of individuals in order to protect the positions of others. By not employing fixed questionnaires (but possibly integrating parts of the questions they contain) such as those used in other evaluation methods\(^6\), but tailor made and open questions, can the evaluation be more probing than methods based on fixed questionnaires. Also the scope can be both deeper, to include underlying causes of problems, and wider to include for instance also the prosecution of offences. This is entirely depending upon the discretion of the evaluator and his clients.

**Time consuming**

MORT inspired diagrams serve two purposes:

1. To prepare for the actual evaluation inquiry. It is important here that all descrip-

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5 Mind Mapping was developed by Tony Buzan in the early 1980's, and is an effective method of note-taking and useful for the generation of ideas by associations.

6 In the Netherlands these include, but are not limited to “Leren door middel van Evalueren van Grootschalige Onderzoeken” (L.E.G.O). “Kwaliteitsinstrument Zwacri”, and “Zelfevaluatie Recherche”
tions are expressed in an open question form and do not tend towards conclusions at this stage, that enough time is devoted to drawing up the most complete – with a view to the objective – diagram possible and that the subjects for further investigation correspond precisely with the questions included later in the information plan;

2. The presentation of the evaluation results. MORT diagrams present points of improvement by means of colors, making it possible to navigate quickly through complicated diagrams, without the coherence between different explanatory factors becoming lost.

**Simplified example of segment of MORT inspired diagram**

This example is showing the use of the standard symbols used to represent events. The MORT inspired diagrams are built up using three shapes: rectangles, circles and diamonds, and lines which connect these shapes to each other. A rectangle is used to represent a circumstance or an event with several possible causes. A circle is used for a circumstance or event that cannot be reduced to more deep-lying causes, and a diamond is used when due to the lack of information or other reasons, it was not possible to continue searching for an explanation.

The benefit of the methodology lies in its rigor, flexibility and transparency. But most importantly is the fact that it is primarily based upon common sense. An expertly made MORT like diagram will generate a great many questions to be answered, providing for a balanced assessment of all relevant factors not only in the production, but also in management and thus avoiding bias in direction the attention of the evaluation. As such, these diagrams are a powerful remedy against ‘the problem of no problem’, meaning, that if you are not intently looking for specific clues, chances are that you will never find them, and consequently against the drawing of too hasty and possibly damaging conclusions based upon only fragmentary and unevenly collected information.
Critics of the methodology emphasize the fact that it is complicated and time consuming. There admittedly is some truth in that criticism. The MORT inspired diagram needs to be designed skillfully and with significant subject knowledge. That requires the involvement and mutual cooperation of both a trained user of the technique and experts in the subjects to be covered by the evaluation. And time. The time and effort it takes to perform a sophisticated MORT inspired evaluation exercise make that such efforts can only be undertaken in those instances in which there is a special reason, which can only be decided on a case by case basis.

Since its introduction in the Dutch police and in the curriculum of the training of investigation specialists a great number of evaluations of very diverse events have been conducted using this methodology. Events that have been evaluated using the methodology include crime scene management, the use of telephone intercepts, interviewing witnesses, the use of expert witnesses, and others. These evaluations have demonstrated the value of the methodology, and their results are proof of its usability in law enforcement.