Environmental scans are one of many forms of business intelligence. Business intelligence is the use of technology and analytical processes understand and evaluate the performance of an organization. Business intelligence includes data access and reporting, and analytics

- Data access: collect, collate, disseminate raw number, records and information
- Reports: documentation of basic data processing to describe the past and current state of the organization and sub units.
- Analytics: use of statistical and quantitative analysis, explanatory and predictive models to inform decisions and actions.

Table 1 describes the increasing advantage of moving from basic access to data to increasing use of analytics.

Table 1 Business intelligence and analytics[1]

ADVANTAGE TO ORGANIZATION	COMPLEXITY OF DATA PROCESSING	QUESTIONS TO BE ANSWERED	
	Optimization	What is the best that can happen	
	Predictive modelling	What will happen next	ANALYTICS
	Forecasting/extrapolation	What if these trends continue	
	Statistical analysis	Why is this happening	
	Alerts	What actions are needed	DATA ACCESS AND REPORTING
	Query/drill down	Where exactly is the problem	
	Ad hoc reports	How many, how often, where	
	Standard reports	What happened	
	DEGREE OF INTELLIGENCE		

What is an environmental scan

Environmental scans provide data and information required by decision makers to inform strategic planning—identifying questions, understanding, targeting, goal setting, forecasting and planning. The information collected and analyzed should help organizations identify and bridge gaps between an organization's current state and its' desired future.

Generally environmental scans capture, share and integrate relevant and valid knowledge about the organization and its operating environment to facilitate informed decision making at all levels. Specific objectives of an environmental scan would include:

- Detect important economic, social, cultural, technological and political trends, situations and events
- Analyze and understand links between the above and the organization with regard to community needs, short and long term goals and the resources needed to achieve those goals (i.e. staff, skills and technology)
- Identify and analyze potential opportunities and threats to the community and police organization
- Provide planning framework linking environmental factors, resources and solutions

[1] Adapted from Davenport T.H. and Harris, J.G. (2007) Competing on Analytics: The New Science of Winning. Harvard Business School Publishing: Boston.

Factors to consider relating to policing

Considering the role of police in Alberta and the work police are asked to perform by the citizens they serve provides the factors that impact police work:

- Role: Alberta's police work with communities, non-government groups and government resources to provide citizens with safe, secure communities in which to live, work and raise families.
- Work: Alberta police perform a wide range of work. To fully assess police performance, this work is broken into five output categories:
    - **Enforcement:** Identify, respond, investigate, and provide required support for the administration of justice and to keep the peace.
    - **Problem solving:** Identify and address issues within community, examine root causes and establish strategies to assist in resolving and preventing them
    - **Awareness:** Promote an accurate perception of safety; prevent and reduce crime and victimization and ensure effective communication between police and their communities.
    - **Community coordination:** Cultivate and maintain positive, productive and creative relationships with communities.
    - **Professionalism:** Promote and maintain organizational and individual professionalism through internal performance management systems such as: training; supervision and management practices; employee development and support; corrective action.

Environment

External: General environment factors

- Demographics: population (municipal and metropolitan), gender, age, relevant sub-groups (neighbourhoods, culture, health status) education level, employment levels, shadow / transient populations
- Geography: relevant boundaries, distances, terrain, climate (disaster potential), specialized area use (residential, business, industry)
- Economy: relevant indicators, industry, business
- Infrastructure: social support (health, education, financial), transportation, communication
- Statutory: Federal (international?), provincial, local. Changes, trends

External: Police sector factors: What are the issues? How will each issue impact policing as a sector.

- Human resources: Hiring, training, retention, retirement, gender/ethnic issues.
- Organization design issues: Staff and other resource management
- Operational and administrative practice issues
- Community / citizen issues: International, national, regional
- Oversight (government, independent bodies)

Internal: Agency specific factors:

- Current staffing: number, skill sets (general, specialist)
- Human resources: hiring, training, retention, retirement, gender/ethnic issues.
- Organization design: Level of centralization, departmentalization, process formalization, sub-unit span of control
- Information technology: communication, record management, resource management
- Equipment: current state, pressures to replace / update / change
- Facilities: current state, pressures to replace / update / change
- Community resources: local government, partner organizations, citizens
- Community consultations: Surveys of community and partner organizations, Town Hall meetings, other sources of input

Current state of work

The following table outlines work areas selected for analysis to determine current and past state. See the Police Performance Management System measures for full descriptions.

OUTPUT CLUSTER	SUB-SET
Organization	Manage police related work and resources
Enforcement	Manage response related resources
	Criminal
	Provincial
	Municipal
	Support to justice
Problem solving	Collect and process data
	Establish and maintain positive and productive partnerships
	Analyze data / identify partners
	Identify issues and plan projects
	Execute projects and evaluate
Awareness	Collect and process data
	Develop and provide information (all media types)
Community coordination	Establish and maintain relevant relationships
	Work with community to identify and address need
Professionalism	Collect and process performance data
	Provide relevant HR support to organization and members: hiring, training, member wellness, complaints, etc
	Provide training relevant to work

Analyze available data to Identify sub-sets of work in each output cluster then determine:

- Volume of work in each sub-set
- Location and time, day, month of occurrence
- Complainant / victim: Who reports / requests the work, is there a victim
    - Gender, age, other relevant information related to those involved
- Offender: who is the subject / accused of offences or who / what is the problem source
- Staff (number, skills, personal equipment) required to investigate / resolve the issue
- Resources (vehicles, facilities, technological support) required to investigate / resolve the issue

What is the volume and complexity of work, how it is performed (work flow), what staff and resources are needed to perform the work. Analysis should identify relevant correlations and trends that could be employed to analyze and predict changes in work and how work is performed.

Desired future state of work and agency

Consider past and present work performed in the context provided by the external and internal environmental factors. Use that information to make informed decisions on the future state of work. What gaps exist between the present and the future state of work regarding:

- Workload: volume, type, complexity
- Resources: internal and external
    - Internal: Staff numbers, skills and time required; organization design; information technology (software, hardware); operational and administrative equipment (vehicles, maintenance, weapons); and facilities;
    - External: loss of or addition of partner organization; consider above list for partner
- Work flow: risk management practices such as policies and procedures; reporting requirements; investigative changes; forms

What issues or gaps exist and how will you address those gaps? Examine changes in environmental factors that may have a negative impact of on work volume, work flow, staff and resources. Use this information to address the impacts:

- Eliminate negative occurrences / impact
- Reduce the frequency of negative occurrences / impact
- Mitigate consequences of negative occurrences / impacts on work volume, work flow, staff, resources

For example:

- Can changes in any of the factors considered be altered?
- Can work volume be altered? Identify work that is better suited to other government or non-government organizations
- Can work be performed by other police resources? Use of technology or other police units to perform work.
- Can work flow be modified? Delayed response, on-line reporting, calls related to an identified problems assigned to unit responsible to handle as an aggregate. Introduce new skill sets and/or resources to increase efficiencies / effectiveness. Modify schedules or overlap shifts.