

21ST CENTURY SKILLS OF ECONOMIC INTELLIGENCE RELATED TO THE RESILIENCE OF THE NATIONAL ECONOMY

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ABSTRACT

Indonesia is an agricultural country, but imports rice, sugar, wheat flour, maize, milk powder, onions, garlic, soybeans, carrots, from abroad. In all countries of the world, agriculture is the most protected sector of the economy. Food security is important. If a country imports most of its food products from other countries to fulfill its need because the price is lower than domestic prices, then the country will become dependent in its food supply on other countries for the future. This will be dangerous. So that 21st century skills are needed towards economic intelligence in Indonesia who can be relied on in terms of national economic resilience. These skills include: Ecological: the business environment, Psycho-sociological: internal actors of organisation, Reticulated: external human networks claimed and mobilized around the project, Teleological: final purpose of the approach through strategy development, Technological: includes all the methods, tools and techniques used for the entire process of decision support through surveillance process, information protection, or benchmarking. Economic intelligence concerns the set of concepts, methods and tools which unify all the co-ordinated actions of research, acquisition, treatment, storage and diffusion of information, relevant to individual or clustered enterprises and organisations in the framework of a strategy.

Keywords: *economic intelligence; national economic resilience, 21st century skills*

INTRODUCTION

Indonesia is an agricultural country, but imports rice, sugar, wheat flour, maize, milk powder, onions, garlic, soybeans, oranges, carrots, from abroad. Imports of soybean increased from 3.64 million tons 2009 to 4.61 million tons 2010. And that of soybean seeds from 1.1 million tons in 2006 to 1.7 million tons in 2010. In all countries of the world, agriculture is the most protected sector of the economy. Food security is important. If a country imports most of its food products from other countries to fulfill its need because the price is lower than domestic prices, then the country will become dependent in its food supply on other countries for the future. There will be no farmland and farmers anymore, then foreign suppliers will increase their prices and food will not be cheap anymore. This will be dangerous (Tarmidi, 2014: 1).

Economics itself is a tool for producing objective analysis does not mean that all economists are always objective. Economists study things about power, poverty, growth, and development. It is difficult to hold on to the models that underlie such subjects without being affected by the real world behind them (Harford, 2009: 39).

Economists have recently come to the same conclusions about protectionist laws, which protect certain groups close to the authorities while sacrificing many others both in developed and developing countries. Billions of people can enjoy the benefits of better economic policies. Millions of people die because of bad policies. Sometimes the logic of economics is so enthralling that it is impossible for economists who do not want to appear to talk.

Economists are accustomed to thinking that economic wealth comes from a combination of man-made resources (roads, factories, machinery, telephone systems), human resources (hard work and education), and technological resources (technical skills - or just high-tech tools). Therefore, it is clear that poor countries can grow into rich countries by investing in physical resources and by improving human resources with education and technology transfer programs (Harford, 2009: 267).

21st century skills in economic intelligence related to national economic resilience are aimed at how to provide support for an economic system that is able to sustain the continuity of the struggle by building a strong, independent and competitive economic structure and supported by a distribution system that reaches all regions of Indonesia. Preparation of defense logistics is part of the development of non-military defenses held in an integrated, coordinated, and cross-ministry/ institution. Its realization through strong economic development with high growth and national industries that are competitive and independent, which in turn will be able to realize the independence of defense facilities and logistics centers spread in each region. The economic sector must take a concrete role, through the development of a healthy economic sector so as to achieve high growth rates. Economic and trade cooperation with other countries is built mutually, by utilizing leading sectors that have high bargaining positions so that they can be used in implementing active defensive strategies.

Indonesia must be able to survive in the face of economic pressure from other countries. If subjected to restrictions, embargoes, or economic sanctions on a large scale in the form of economic blockades, Indonesia must be able to overcome them with its own economic capacity. The economy must be able to be a suppressing instrument against other countries that threaten Indonesia. Natural resources that are a mainstay and dependence on industrial countries need to be managed and utilized to enhance Indonesia's bargaining position.

The problem of national economic resilience in Indonesia is inseparable from independence. The high dependency of domestic industries (for example: textiles, medicines, and foodstuffs) to foreign countries includes most of the raw materials, auxiliary materials, technology. Dependence on funding sources includes foreign debt. National companies that manage energy and mineral resources are only 30.6%, the rest are foreign. Natural gas: national 21.70%, the rest foreign. This study wants to answer the question of how economic intelligence contributes positively to the resilience of the national economy (Tarmidi, 2014: 2).

METHODOLOGY

The research specifications in this study use descriptive analytics, which describes the results of the study in accordance with the problems and objectives to be achieved and analyze them in terms of applicable laws and regulations. Data analysis which describes the data in the form of sentences that are good and correct, so that it is easy to read and given meaning so that the results of data analysis facilitate inductive conclusions. Materials from the results of the processing are analyzed qualitatively and then discussed. Based on the results of the discussion then conclusions were taken as answers to the problems studied.

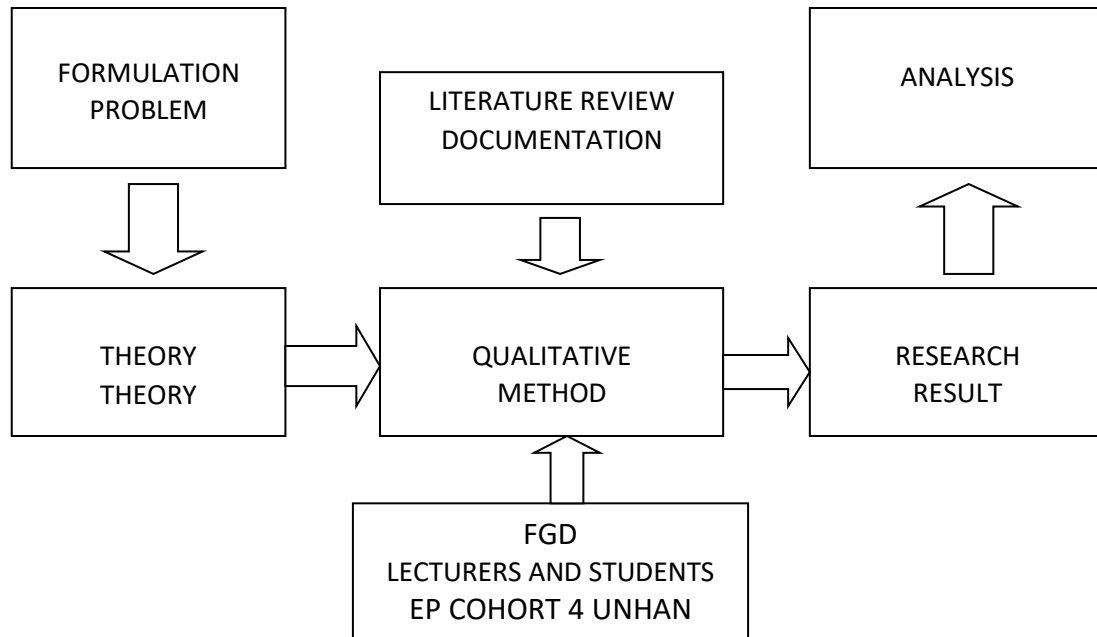


Figure 1.
The Flow of Thinking in Research

RESULTS AND DISCUSSION

Economic intelligence concerns the set of concepts, methods and tools which unify all the co-ordinated actions of research, acquisition, treatment, storage and diffusion of information, relevant to individual or clustered enterprises and organisations in the framework of a strategy. Economic intelligence as the set of coordinated actions of search, processing and distribution for exploitation, of useful information for economic actors (Martre, 1994: 17-18).

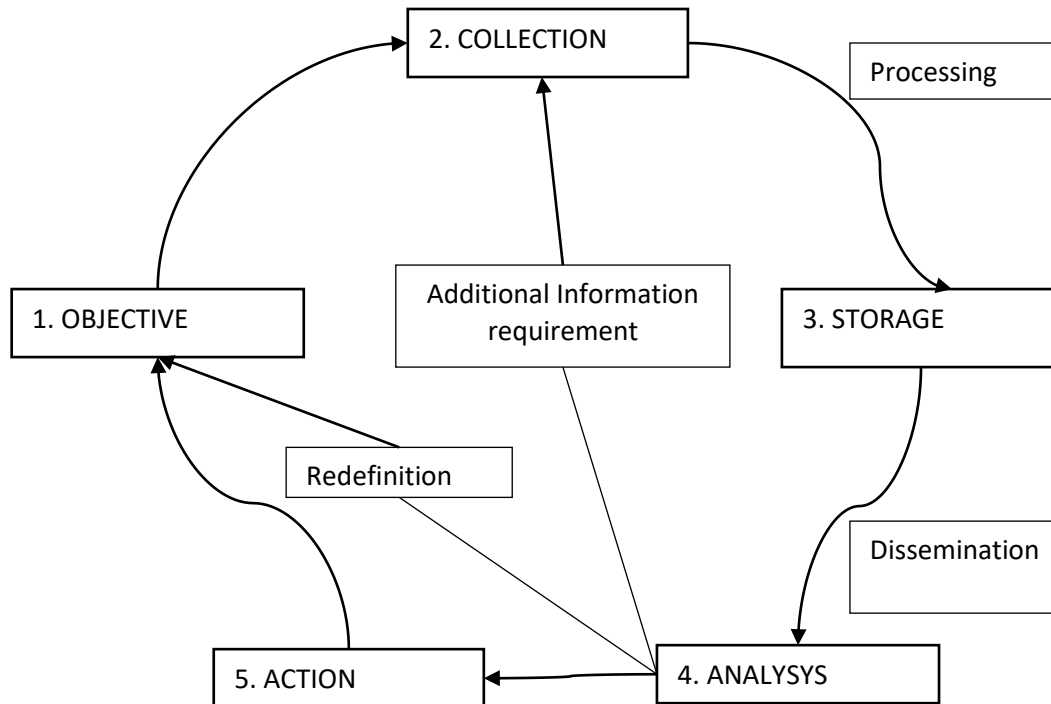


Figure 2.

The Intelligence Cycle

Economic intelligence is the art of detecting threats and opportunities by coordinating the collection, sorting, storage, validation, analysis and dissemination of useful or strategic information to those in need (Besson & Possin, 1996 : 15). Economic represents the control and protection of strategic information that enables the entrepreneur to optimize the decision making.

From data to intelligence:

- Data: raw, unconnected facts or numbers without a frame of reference. Data i the level immediately before information when working toward intelligence.
- Information: A collection of bits and pieces of data linked by the relationships between them and allowing a formalised written, verbal or visual message.
- Knowledge: Information showing a pattern relation that is understandable in itself and its implications by the user of it.
- Intelligence: Wisdom arising from the understanding of basic principles that support knowledge, allowing the creation of scenarios, the modification of strategies and innovation.

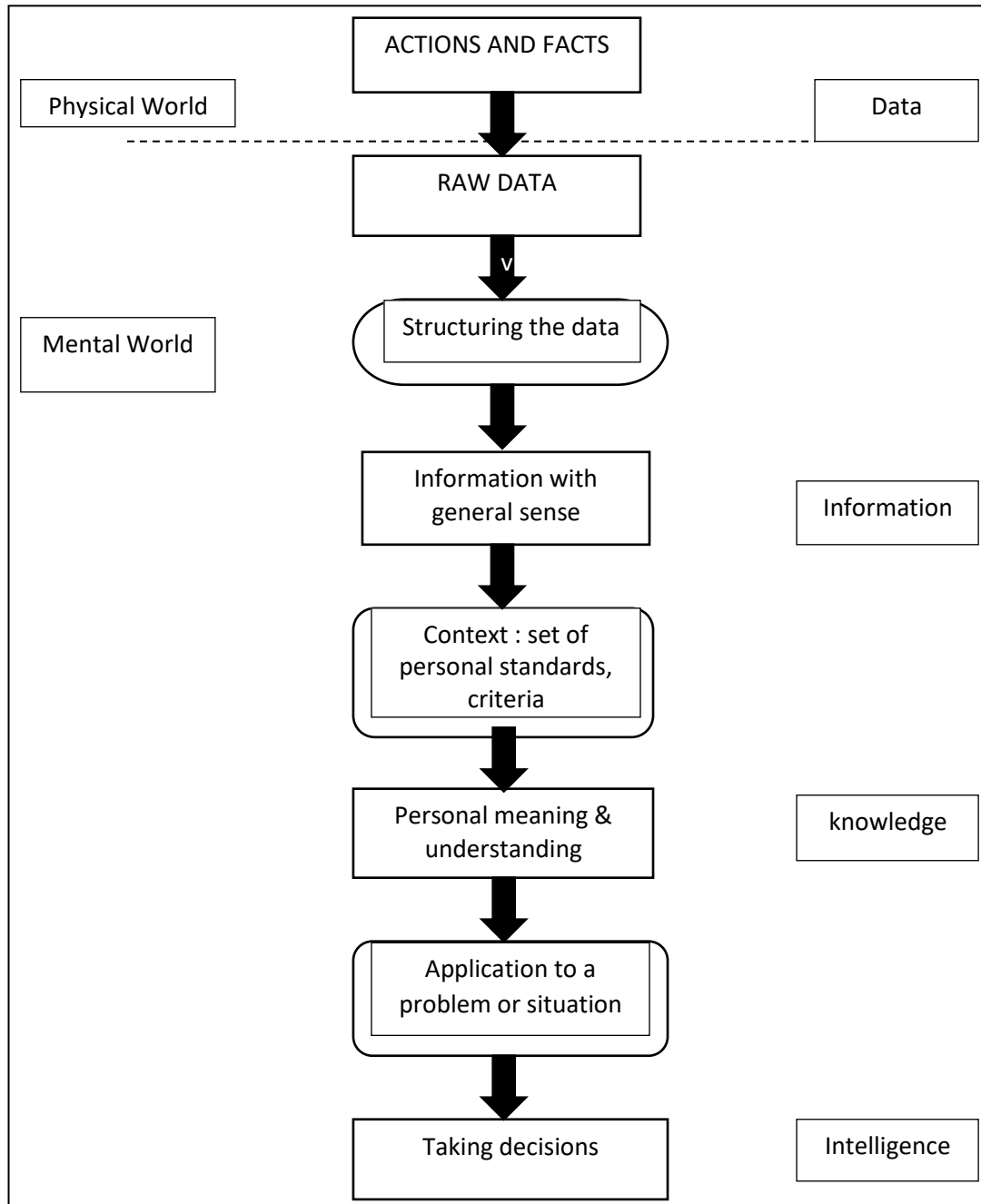


Figure 3.

From Data to Intelligence

Dimensions of economic intelligence approach (Achard, 2005: 77-92):

- a. Ecological: the business environment (partners, competitors, markets, etc).
- b. Psycho-sociological: internal actors of organisation.
- c. Reticulated: external human networks claimed and mobilized around the project.
- d. Teleological: final purpose of the approach through strategy development.
- e. Technological: includes all the methods, tools and techniques used for the entire process of decision support through surveillance process, information protection, or benchmarking, for example.

Economic intelligence mode (Revelli, 1998: 18-19):

1. A doctrine which consists of the definition of the concept of economic intelligence recognized by the whole group;
2. An approach consisting of:
 - a. A master plan for moving from theory to method in order to develop and implement a coherent strategy;
 - b. A master plan to develop this method and to introduce the structure, control mode, cost problems and schedule.
3. A federated structure of two networks:
 - a. The network of concerned information poles
 - b. The network of analyzers.
4. An experiment which defines the general operational rules of economic intelligence within the organization:
 - a. The degree of freedom for each group
 - b. The recommendations and guidelines
 - c. Media and technical support
 - d. Data storage
5. A quantitative and qualitative control

Five basic principles of Economic Intelligence (Bertacchini, 2004 : 35):

1. The integration and taking into account of the environments in anticipation logic;
2. The organization design based on collective intelligence;
3. An organization built around systems and networks;
4. A combination of a managerial logic and entrepreneurial logic;
5. Adhesion to a Code of Ethics/Deontological Code.

This model consists of 11 factors (Bertacchini, 2004: 35):

1. 7 action factors: leadership, ethics, forecasting, environment perception, knowledge and skills, influence, networks' organization.
2. 4 result factors: value creation, information quality, image, decision-making process.

The implementation of economic intelligence system can be realized in 5 phases (Wilenski, 1967: 3):

1. A planning phase to define what the expectations of economic intelligence unit are;
2. A research phase for "people needed vs skills required";
3. A phase of positioning economic intelligence in the organization's inner core as an internal provider system accompanying missions and decision making objectives, while participating in obtaining information useful at all levels;
4. A phase of developing economic intelligence process in terms of surveillance dimensions, information gathering, processing and dissemination in accordance with decision-making objectives;
5. An evaluation phase through a measure of model performance, with criteria for qualitative and quantitative assessment.

The role of economic intelligence (Wilenski, 1967: 3):

1. Finance and monetary
 - a. Problems with state finance and taxation
 - b. Monetary and banking issues

- c. Capital market issues
2. Food problems
3. Problems with energy and mineral resources
 - a. Oil and gas
 - b. Natural gas
 - c. Source of electrical energy
4. Problems of natural resources
5. Land issues
6. Industrial and trade issues

Basic principles of economic intelligence activities / operations (Baumard, 1991: 29):

1. Integrated, working in teams
2. Efficient, the funds and facilities used must be commensurate with the results obtained.
3. Safe, keeping information from leaking.
4. Flexible (flexible), the procedure is applied as needed.
5. Imaginative, quickly get the sense to overcome difficulties.
6. Must be able to predict and know what will happen, for that needs to be supported by the ability of imagination, anticipation, and innovation.

Principles of economic intelligence (Baumard, 1991: 29):

1. Tasks: search for, find, and collect information, and present information on the economic field for strategic interests in the national, regional and international spheres that are needed as input for determining policies and decision making in the context of national defense and security development.
2. Function: investigation, security, economic raising.
3. The role in national economic development:
 - a. Planning: collecting information
 - b. Implementation: presents information about implementation, obstacles, and anticipating disruptions.
 - c. Evaluation: collects information about the results of economic development.
4. Economic intelligence rules:
 - a. Welfare: focus on the economy that concerns the nation's prosperity.
 - b. Economic vulnerability: focus on weaknesses in the economy.
 - c. Industry: factors related to the processing of goods.
 - d. Sources of economic capacity: potential or already processed.

Economic intelligence activities (Baumard, 1991: 29):

1. Inquiry:
 - a. In the country: the results of development, the possibility of a threat that threatens, parties that damage the national economy, early warning.
 - b. Overseas: international monetary, bilateral and multilateral trade, international economic social, sabotage and economic subversion.
2. Security:
 - a. Main tasks: collect information to prevent disturbances, obstacles, deflection, and efforts to damage the national economy.
 - b. Main objectives: smooth running of national economic programs without obstacles, disruptions and threats.
 - c. Actions: preventive and repressive against disturbances and threats.

3. Raising:
 - a. The main task: creating economic conditions that benefit the national economy.
 - b. Activities: influencing the foreign economic policies of other countries to benefit the Indonesian economy, play a role in international institutions.

The stages of economic intelligence activities:

1. Task analysis and analysis of the situation until the formulation of tasks, and objectives.
2. Arrange operations, and carry out operations, which include:
 - a. Understanding the situation
 - b. Understand the direction of economic policy
 - c. Select and determine goals, sources of information, letters, methods, and means.
 - d. Activities and dynamics in the field.
 - e. Processing data into economic intelligence.

Economic intelligence organization (Jakobiak, 2004: 14):

1. Following the organization's arguments in general plus special provisions:
 - a. Compartment, cover, security method
 - b. Cannot stand alone because part of strategic intelligence, but can operate alone.
 - c. Elements of the leadership, assistant leaders, implementing analysts, and services.
2. The executing element can penetrate all economic intelligence components: welfare, economic vulnerability, industry, natural resources.
3. Consists of various elements both intelligence and other bodies, both official and unofficial.
4. Utilizing networks: other departments, entrepreneurs and managers, lawyers, academics and experts, marginal officials.

Clandestine (secret activity):

1. Search for information from closed sources.
2. The forms:
 - a. Espionage: obtains information that cannot be obtained through an open channel to confirm information that has been obtained from an open channel.
 - b. Counterintelligence: protect its confidentiality, neutralize the clandestine operations of the other party.
 - c. Covert action: to influence the other party: with white, black, gray, disinformation propaganda.

CONCLUSIONS

Activities, methods and tools associated with different stages of economic intelligence process.

Table 1.
Activities, Methods and Tools Associated with Different Stages of Economic Intelligence Process

No	Stages of EI process	Actors	Activities & Areas of expertise	Examples of tools
1	Identification of the problems to solve in terms of threat, risk and danger	Decision maker	<ul style="list-style-type: none"> - Knowledge of immediate and extended environment 	<ul style="list-style-type: none"> - Analysis methods and tools: Pareto, SWOT, Ishikawa diagram, BCG matrix, MACTOR method, value analysis, Six Sigma, Business Process, etc. - MEPD questionnaire - Business Plan, Project Management, Gantt, Pert, etc.
2.	Transformation of decision problem into information search problem	Decision maker and watcher	<ul style="list-style-type: none"> - Skills for decision problem analysis and informational problem projection - Translation and contextualization of demands, prior research and stored cases - Defining the basket of information indicators - Monitoring and evaluating the translation 	<ul style="list-style-type: none"> - Needs analysis and tools (MEPD, MEDESIIE, UML, requirement engineering, etc) - Auditing method and tools, TQM, PDPA - Brainstorming tools and concept mapping - Computer Supported Cooperative Work (Groupware

No	Stages of EI process	Actors	Activities & Areas of expertise	Examples of tools
			process	tools, E-mail, E-conference, workflow) - Case-Based Reasoning Methods
3	Identification of relevant information sources and validation of sources	Watcher	<ul style="list-style-type: none"> - Search for formal and informal sources; - Selection of appropriate sources for the decision problem, memorization, and information traceability; - Valuation of indicators by information retrieval; - Crossing sources, procedures for verification and monitoring of information. - Skills and abilities for information systems and documentary languages (thesaurus, query language, creation of queries) 	<ul style="list-style-type: none"> - Private networks - Databases, documentary software - Browsers, meta-browsers - Enterprise Information portal (EIP) - Surveillance Software for sources - Alert agents - Intelligence agents - Specialized portals - Specialized browsers - Search engines - Documentation - Archives and other recording tools - Semantic Web
4	Collection and validation of information	Watcher		

No	Stages of EI process	Actors	Activities & Areas of expertise	Examples of tools
5	Processing the collected information for the calculation of indicators	Watcher	<ul style="list-style-type: none"> - Intellectual and physical processing of documents (description, tracking, indexing, memorization, abstract, bibliography, synthesis,...) - Linguistic processing and information mapping (translation, visual representations of information) 	<ul style="list-style-type: none"> - Automatic abstracting and summarizing tools - Classification tools - Content extraction tools, concept mapping - Infometry, statistical method and tools
6	The adapted presentation of informational solutions	Watcher	<ul style="list-style-type: none"> - Elaborating a final format for presenting information (contingency tables, graphs, surveillance reports, synthesis notes, reporting) 	<ul style="list-style-type: none"> - Birotics, PAO - Collaboration tools - Sharing tools - Dissemination tools
7	Interpretation of the information	Decision maker	<ul style="list-style-type: none"> - Ability to analyze and interpret information 	<ul style="list-style-type: none"> - Decision support systems (DSS), SIS, Data Warehouse, Data Mining - Management tools, Scoreboard, decision matrix
8	Decision making for the resolution of the problem	Decision maker	<ul style="list-style-type: none"> - Knowledge of decision making process - Monitoring the 	

No	Stages of EI process	Actors	Activities & Areas of expertise	Examples of tools
			informational indicators - Monitoring the indicators for decision making	
Through out the entire process	Protection of informational patrimony	Watcher and decision maker	- Identifying, disseminating, storing, sharing and protecting knowledge - Selective dissemination of information	- Security software for systems and networks, firewalls, antivirus, cryptography and steganography - Patents, quality norms, brand image, etc - Securization of LAN and PAN networks, Video Surveillance systems - Intranet, virtual private networks, secured protocols and secured networks.

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