The following checklist for problem, opportunity, and directive identification uses Wetherbe's PIECES framework. Note that the categories of PIECES are not mutually exclusive; some possible problems show up in multiple lists. Also, the list of possible problems is not exhaustive. The PIECES framework is equally suited to analyzing both manual and computerized systems and applications.

PERFORMANCE

A. Throughput—the amount of work performed over some period of time.
B. Response times—the average delay between a transaction or request and a response to that transaction or request.

INFORMATION (and Data)

A. Outputs
   1. Lack of any information.
   2. Lack of necessary information.
   3. Lack of relevant information.
   4. Too much information—"information overload."
   5. Information that is not in a useful format.
   6. Information that is not accurate.
   7. Information that is difficult to produce.
   8. Information that is not timely to its subsequent use.
B. Inputs
   1. Data is not captured.
   2. Data is not captured in time to be useful.
   3. Data is not accurately captured—contains errors.
   4. Data is difficult to capture.
   5. Data is captured redundantly—same data captured more than once.
   6. Too much data is captured.
   7. Illegal data is captured.
C. Stored data
   1. Data is stored redundantly in multiple files and/or databases.
   2. Stored data is not accurate.
   3. Data is not secure from accident or vandalism.
   4. Data is not well organized.
   5. Data is not flexible—not easy to meet new information needs from stored data.
   6. Data is not accessible.

ECONOMICS

A. Costs
   1. Costs are unknown.
   2. Costs are untraceable to source.
   3. Costs are too high.
B. Profits
   1. New markets can be explored.
   2. Current marketing can be improved.
   3. Orders can be increased.

CONTROL (and Security)

A. Too little security or control
   1. Input data is not adequately edited.
   2. Crimes (e.g., fraud, embezzlement) are (or can be) committed against data.
   3. Ethics are breached on data or information—refers to data or information getting to unauthorized people.
   4. Redundantly stored data is inconsistent in different files or databases.
   5. Data privacy regulations or guidelines are being (or can be) violated.
   6. Processing errors are occurring (either by people, machines, or software).
   7. Decision-making errors are occurring.
B. Too much control or security
   1. Bureaucratic red tape slows the system.
   2. Controls inconvenience customers or employees.
   3. Excessive controls cause processing delays.

EFFICIENCY

A. People, machines, or computers waste time.
   1. Data is redundantly input or copied.
   2. Data is redundantly processed.
   3. Information is redundantly generated.
B. People, machines, or computers waste materials and supplies.
C. Effort required for tasks is excessive.
D. Materials required for tasks is excessive.

SERVICE

A. The system produces inaccurate results.
B. The system produces inconsistent results.
C. The system produces unreliable results.
D. The system is not easy to learn.
E. The system is not easy to use.
F. The system is awkward to use.
G. The system is inflexible to new or exceptional situations.
H. The system is inflexible to change.
I. The system is incompatible with other systems.
J. The system is not coordinated with other systems.