



Government
of
Saskatchewan



PAC 52-28

Tabled by Chair

Date October 3, 2019

Memorandum

Ministry of Education

From: J. Robert Currie
Deputy Minister

Date: June 14, 2018

Phone: 306-787-2471

To: Standing Committee on Public Accounts
c/o Trent Wotherspoon, Chair
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Re: Follow-up to Public Accounts Committee June 12, 2018



As follow-up to the discussion at Public Accounts Committee on June 12, 2018, please find enclosed information regarding:

- the paper created by the ministry referenced on page 229 of the 2017 Report, Volume 1, Chapter 19; and,
- June 2017 graduation rates as additional data for the Trends for Persistence to Complete Grade 12 table on page 234 of the 2017 Report, Volume 1, Chapter 20.

Should you require further information, please contact my office.

J. Robert Currie
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Enclosures

cc: Honourable Gordon S. Wyant, Minister of Education

Information request by the Standing Committee on Public Accounts regarding June 2017 graduation rates

The June 2017 graduation rate data for creation of a new row to the Trends for Persistence to Complete Grade 12 chart on page 234 of the 2017 Report, Volume 1, Chapter 20 would have the following data:

Three-year rates:

All – 76.5
Non-FNMI – 85.4
FNMI – 43.2

Five-year rates:

All – 84.0
Non-FNMI – 90.4
FNMI – 59.8

EightPLUS-year rates:

All – 84.7
Non-FNMI – 90.0
FNMI – 63.1

Generic considerations in developing a Performance Evaluation process

Ideally, the Performance evaluation process would involve several steps (outlined in Appendix A) and use of a number of tools.

Tools:

The primary tools used to continually improve the quality of services provided are:

- **Check sheets:** Charts for gathering data. They assist in gathering accurate and pertinent data and allow the data to be easily read and used (Appendix B).
- **Cause-and-Effect Diagrams:** This is an analysis tool that organizes and displays the relationships between different causes for the effects that are being examined. Helps organize the brainstorming process (Appendix C). Major categories of causes are put on major branches connecting to the backbone, and various sub-causes are attached to the branches yielding a tree-like structure. Problem to be solved is put at the head and then major branches filled in. Commonly identified causes are people, procedures, equipment, and material.
- **Flow Charts:** Allows identification of actual flow or sequence of events in a process. The flowchart lists the order of activities and different symbols have specific meanings. After a process has been identified for improvement, and prioritized, it is then broken down into specific steps - in a flowchart (Appendix A).
- **Pareto Charts:** A Pareto chart may be used to display the identified problems graphically to enable prioritization. A Pareto chart shows the distribution of items and arranges them from the most frequent to the least frequent. It enables us to focus on problems that offer the greatest potential for improvement by showing their relative frequency or size in a descending bar graph (Appendix D).
- **Scatter Diagrams:** Used to reveal possible cause-and-effect relationships (Appendix E).
- **Histogram:** provides a snapshot of the variation of the results of a process. Forms the bell-shaped curve which is characteristic of a normal process. Histogram helps to analyze what is going on in the process and helps show the capability of a process (Appendix F).
- **Control Charts:** Used to monitor, control and improve process performance over time by studying variation and its source. By using control limits at three standard deviations above and below the average, points that fall outside the limits are identified. Action is then initiated to look for possible causes for this behavior (Appendix G).
- **Customer satisfaction surveys:** Generally use poor measurement systems such as limited scales, or scales that are anchored at extremes.
- **Sampling and verification:** Technique of inspecting and assessing a sample of work from the process to assess quality. Samples of work are checked at regular intervals to verify quality of results.

Design and Management:

The design and management of the Performance evaluation process would involve four steps (Appendix H):

- a) **Planning:** Collection of pertinent data, and identification of the problem and the possible causes.
- b) **Doing:** Making the intended changes to correct or improve the existing situation.
- c) **Studying:** studying the effect of the changes made on the existing situation.
- d) **Acting:** Standardizing the changes if the results are desirable.

Specific procedures (Appendix A) to design the process would include:

1. Problem identification and data gathering:

This would involve identification of the processes that need improvement. Upon identification of the problem areas, brainstorming session may be held with persons involved with the processes to identify the possible causes.

Tools to use: Surveys, Focus groups, or Discussions with clients about their experiences.

2. Prioritizing:

This involves prioritizing the list of problem areas to identify those that have the greatest effect. Those would be highest in priority.

Tool to use: Pareto Chart.

3. Analysis of selected problem:

Upon identification of the problem, it has to be analyzed for possible causes.

Tools to use: Cause-and-Effect or Fishbone diagram, Scatter plots, and Flow charts.

4. Determining key process variables:

Key process variables are those factors that can vary with each repetition of the process and have largest effect on quality of the desired result.

Tools to use: Pareto chart, Cause-and-Effect diagram.

5. Evaluating measurement capability:

It is important to know how accurately the identified key process variables can be measured. Significant errors in system used to measure the process variables would result in unreliable measurements, and hence inaccurate analysis of the process stability and capability.

Tools to use: Customer satisfaction surveys, Sampling and verification.

6. Determine system stability:

This is the state of Statistical Control, i.e. when the process is reasonably stable, the variables can provide a basis for comparison after changes are made to the system. Stability does not imply that the process is operating well enough to meet customer requirements. It tells us that no unusual process variations are being observed. It is a requirement for prediction about the ability of existing systems to consistently meet targets in the future.

Tools to use: Pareto chart, Control chart, Quality Improvement Teams.

7. Determining system capability:

Evaluates the capability of the process to predictably meet specification.

Tools to use: Control charts, Pareto charts.

Measuring performance: The success or failure of the Performance evaluation process may be measured through:

Developing a framework for continuous monitoring of the process:

A continuous monitoring system is needed to keep staff informed, provide feedback, assist in controlling process variation, help achieve continuous reduction in process variation, and evaluate process changes.

Tools to use: Best Practice Methods, Quality improvement teams, Individual feedback.

a) Best Practice Methods

Prevalent best practices help minimize variation, increase adherence to best practices, and make monitoring process easier.

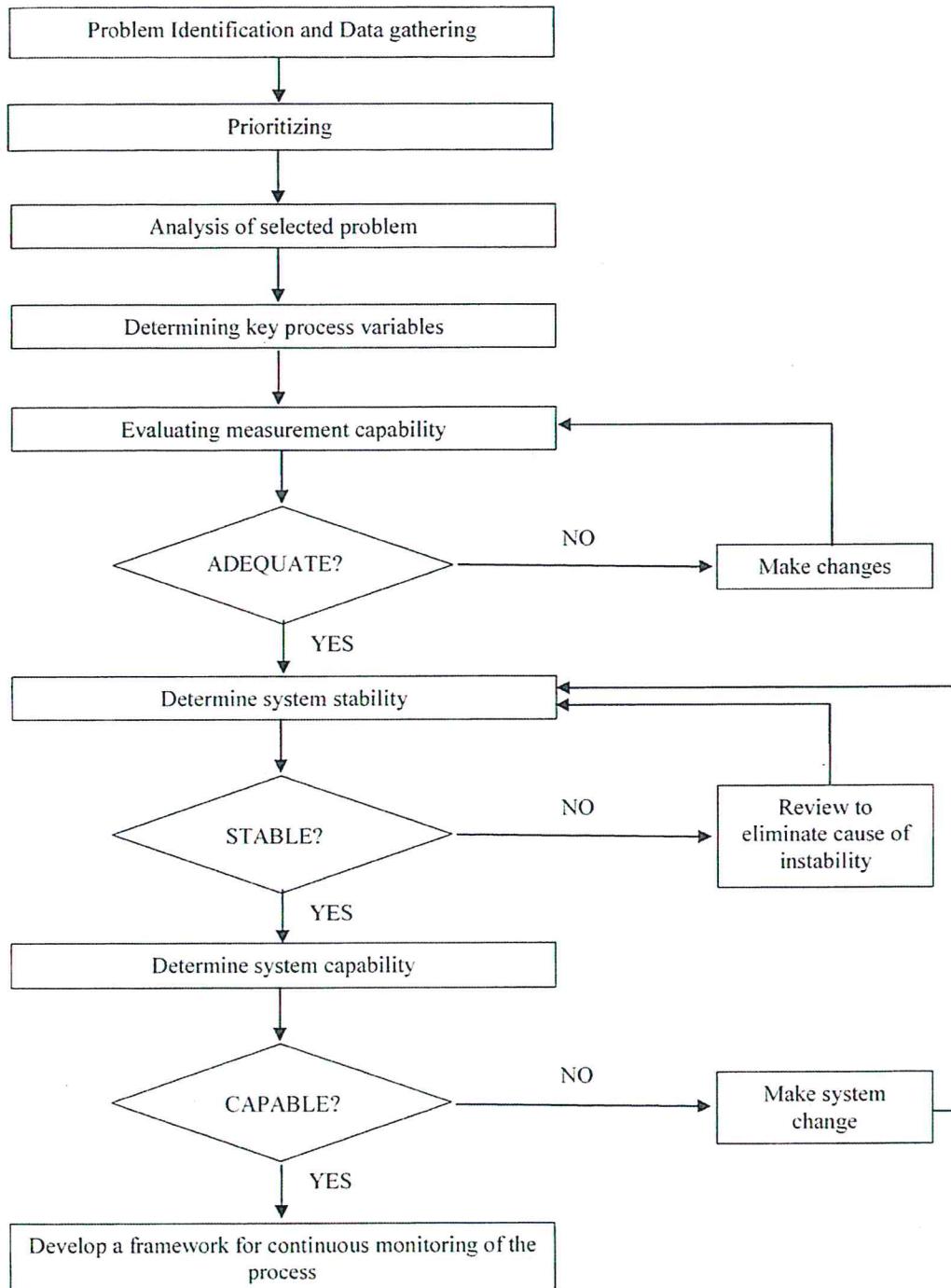
b) Quality improvement teams (QIT)

Regular meetings of QITs enable feedback at group level and encourage seeking solutions of other problem areas. Through this, external environment is improved as well as the skill-level of staff.

c) Individual feedback

Discussions with individual operators engaged in the process can help improve future performance and service quality.

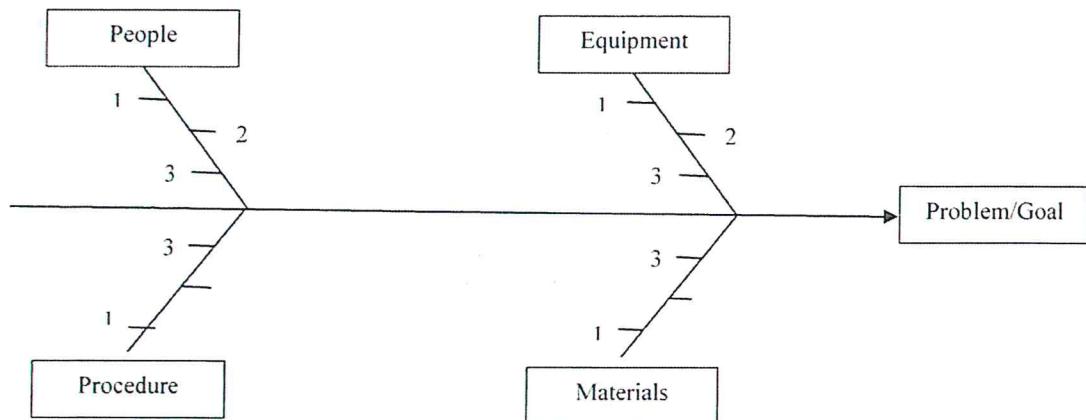
Appendix A: Steps in the Performance evaluation process



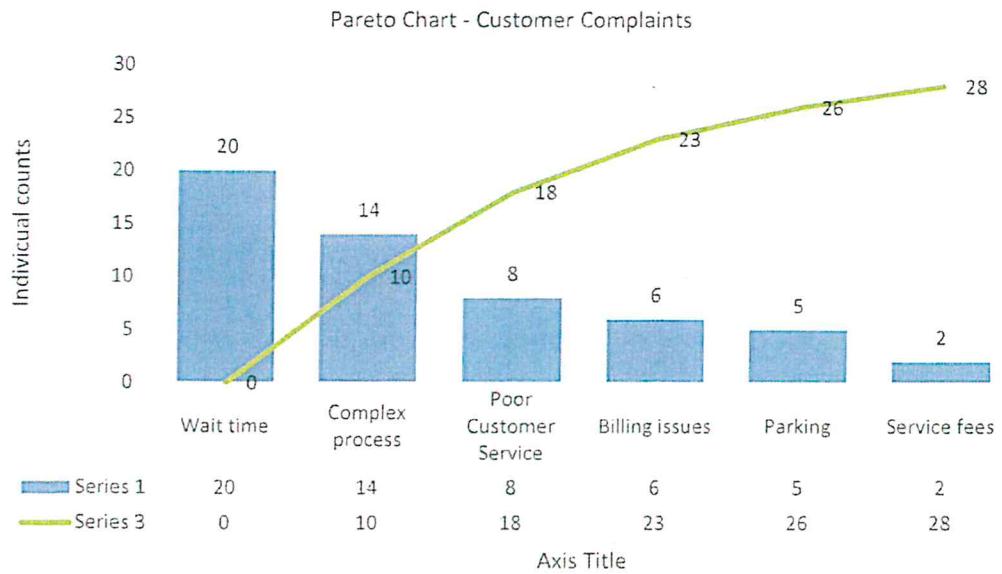
Appendix B: Sample Check Sheet

Operator	Time	Machine 1	Machine 2
Operator A	Morning	XX	XX
	Afternoon	XXX	XXXXXX
Operator B	Morning	XX	XXX
	Afternoon	X	XXXXXXXXXXXX
Operator C	Morning	XXXX	X
	Afternoon	XX	XXXX

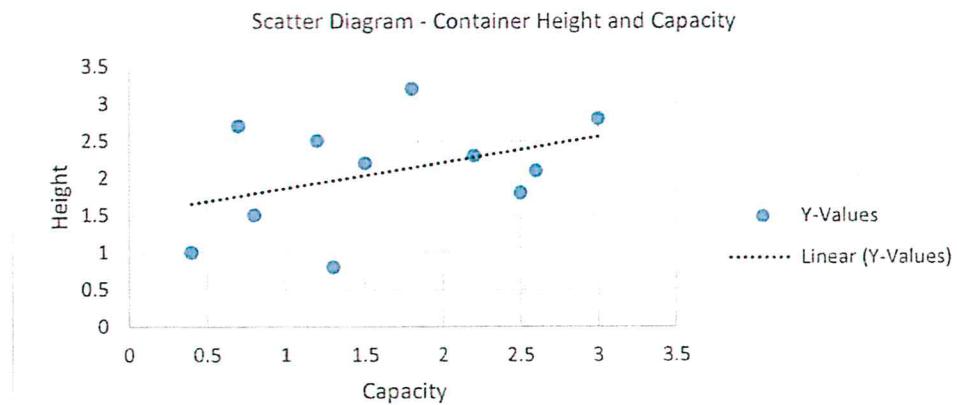
Appendix C: Sample Cause-and-Effect diagram



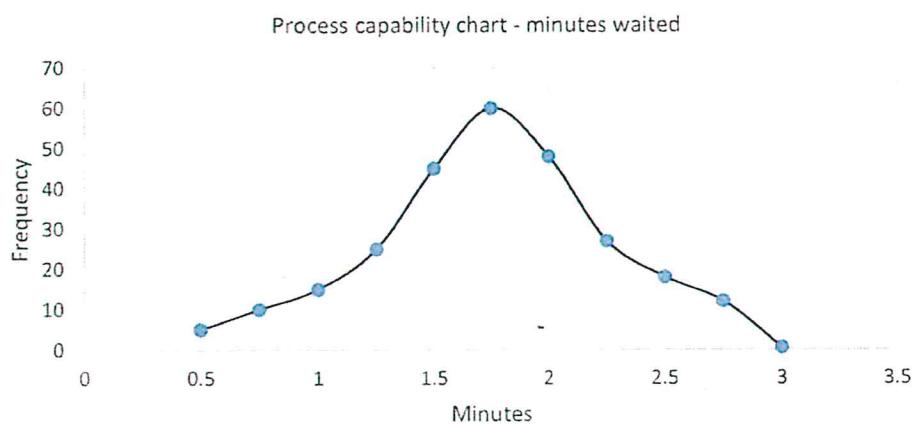
Appendix D: Sample Pareto Chart



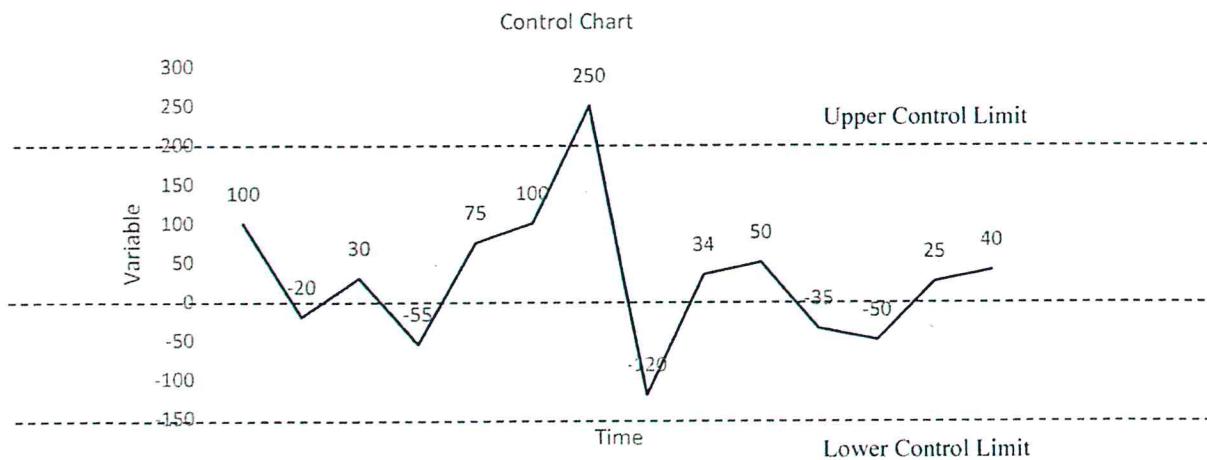
Appendix E: Sample Scatter Diagram



Appendix F: Sample Histogram



Appendix G: Sample Control Chart



Appendix H: Steps involved in Continually Improving the Quality of services

