

# Psychometric Plant Management™

## ... Real-Time Observation, Analysis, Assessment, Reporting

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“Psychometrics is the psychological theory or technique of mental measurement.”<sup>1</sup>

Plant personnel use available data and process information, react to process and data exceptions, manage and utilize processes as prescribed and follow, or not follow, established methods for plant operations; so, what is missing in the current process that would offer the Plant Manager additional, sometimes critical, insight into the status of the plant?

Psychometric Plant Management™ gives a plant manager much more than is presently available. It gives him/her the interpretation of that data and process information by experts and an on demand near real-time view of the entire plant.

Psychometric Plant Management™ adds a new dynamic with a tool that allows the user to continuously monitor, balance, and prioritize a number of process areas simultaneously, based on a real-time analysis of the existing information. It allows unlimited continuous, active monitoring, assessment, and prioritization of all decisions around management of the plant. This is a way to obtain real-time *Plant Reality* without disruption of the workflow.

Today, most responsible stakeholders are using process controls tuned for optimum performance and a “PULL” system; meaning the plant management needs to go out and “PULL” information from the stakeholders. This “Pull” technology amounts to staff meetings, emails, phone calls etc. Of course, staff meetings are not always convenient (especially if things are going wrong), phone calls are highly idiosyncratic depending on availability of the participants (especially if things are going wrong), and emails are too slow and inefficient (especially if things are going wrong).

Psychometric Plant Management™ requires participants to “PUSH” information to the Plant Management in real-time. This “push” must be convenient and simple to execute for the stakeholder and it must contain a modification of the status quo along with an analysis of the observation. The result is a more accurate plant status and the ability to solve issues before they become too large or too late to overcome. Plant Managers are often overly optimistic about the accuracy of the information they are receiving because it is based on measurements. But those measurements are a point in time and do not reflect trends that are not obvious and/or a root cause analysis of the measurements that are in flux when they are being reported. Reporting only measurements can be highly inaccurate as it pertains to the status of total plant operations. An accurate plant status is a function of the four pillars that make up the sustainability of plant operations; measurements, analysis of the measurement data, observation of trends, and process operating predictions. A meaningful status report is the result of the correlation of these four pillars.

What is needed is a management level tool that provides continuous plant-wide oversight.

How do you accurately measure current plant reality and performance and drive the right changes?

As the Plant Manager:

- Would you like to gain insight into your plant and be able to continuously track progress?
- Would you like to allow your stakeholders to update critical information about their specific area of responsibility and have the updates immediately available?

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<sup>1</sup> Merriam-Webster

- Would you like to be able to visually correlate those results with what is the status of other areas of the plant?
- Can you detect problem areas in a meaningful way and react quickly?
- Do you know how to discover long running problems?
- Can you dynamically identify specific areas for improvement?
- Do you know how to gain plant area effectiveness, focus & alignment, and performance?
- Can you, in real time, identify the gaps between knowing that something is wrong and knowing why it is wrong in a specific process?
- Do you know the real-time “Current Reality” of your entire plant; and how each area interacts to create that reality?

Knowledge is the driver!

Do you want to know what's really going on...right now?

Your area stakeholders are eager to help and you may be ignoring the best business intelligence available.

## Process

**How Psychometric Plant Management™ works:** There are standard questions around the status of each plant area. These questions reflect the operating parameters for each area of the plant. An estimate for the number of questions is 1 to 5 questions per factor per area. The total number of questions may be answered in < 3 to 5 minutes. The person/people responsible for those areas answer those questions and the answers are reflected in a high-level chart of the entire plant on a dashboard or multiple dashboards. With any change in plant area status the answers to those questions are updated by the stakeholder after an analysis of the situation, and he/she records a short analysis of the measurement data, observation of trends, and/or process operating predictions. The plant dashboard automatically changes to reflect the new plant status and the plant manager not only sees the immediate result of the overall plant status on his dashboard but he/she can drill down to read the comments by the stakeholder describing what has changed and why this portion of the plant needs attention.

This SaaS online application allows you to continuously assess plant performance by investigating the attributes you have determined are most important and then it helps you dynamically measure area performance relative to the entire Plant.

Answers previously recorded may be updated at any time and periodic global updates may be scheduled at any time.

Plant Managers need the ability to continuously analyze the plant and determine how each plant attribute relates to plant success. Most Plant Managers leave the Dashboard (live) on a monitor in order to be able to view updates as they occur. Having (near) real-time information they can perform an Opportunities Concepts Analysis to help prioritize investment into the attributes that have the greatest need for immediate and significant improvement.

## Philosophy

The organization must establish a standard approach to executing its plants mission and must develop and/or make available common plant management tools and software. Following a formal methodology, along with commonly-used tools, templates, guidelines, and standards, will contribute to increased productivity and higher plant quality. Also, establishing a standard plant methodology and a common set of tools helps facilitate continuous improvement. Psychometric Plant Management™ offers an on-line philosophy that gathers Behavioral Performance Intelligence™ and gives Plant Managers excellent in-

depth visibility into their plants. It continuously examines each plant area with random or scheduled input from internal plant stakeholders.

## Conclusion

This application is a business operations tool that allows Plant Managers to continuously monitor and manage their plants.

By devising a means of skillfully and pervasively continuously eliciting opinions from the stakeholders, a Plant Manager can achieve superior insight and better outcomes across the board.

## Epilogue

NeuraMetrics' tools deliver knowledge that is strategic and actionable. They have delivered on line quantitative, self-assessments world-wide in multiple industries to evaluate performance, procedures, and policies.

Free demos are available.

## About the Author:

Michael St. Angelo is the President and CEO of NeuraMetrics Inc. Mike has held executive sales and marketing positions at a company that was the worldwide leader in process automation, an industry analysis firm that studied and advised major corporations and utilities and a company that marketed enterprise software. He has led the development of an efficient and robust method to conduct mission critical, process and organizational assessments, benchmarking and analysis. His methodology and tools offer expanded insight into causes of organizational performance including analysis of process behaviors. Mike has taught undergraduate courses and provides freelance articles occasionally for industry publications.

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