

**WHY I SHOULD STICK MY NOSE IN OTHER PEOPLE'S BUSINESS  
OR  
WHY I SHOULD PARTICIPATE IN ALL PHASES OF THE DATA LIFE-CYCLE**

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Projects are initiated each year that rely on data to make important decisions. The data used can significantly impact human safety, environmental quality and sometimes the advancement of science. Ideally, data including the entire population of interest would be examined to ensure that all decisions are correct. However, it is rare that data on the entire population can be collected and examined. Thus, a subset of the population is carefully measured and examined to support project decisions. It would also be ideal if measurements could be made with no error and detection limits were 0. However, we do not live in an ideal world, so it is imperative that collected data are representative of the entire population of interest and of sufficient quality to meet project objectives. Decisions made using data that are not representative, or in cases when the measurement criteria have been inappropriately defined for a project, can result in incorrect decisions, pose a risk to human health and the environment, create costly problems, and erode public confidence. All of the stakeholders, including lab managers and personnel, should be actively engaged at all phases of planning, measuring, and data analysis to ensure that the information obtained from sampling is able to support reliable and defensible decision making.

This talk will investigate the defining characteristics of representative data, and address how each person involved in data collection is crucial to ensure data appropriately supports the decision process. Two case studies will be presented, showing why it is essential for labs to be involved in the project planning process and ways laboratory personnel can become more engaged in the data life-cycle phases that take place outside of the lab.