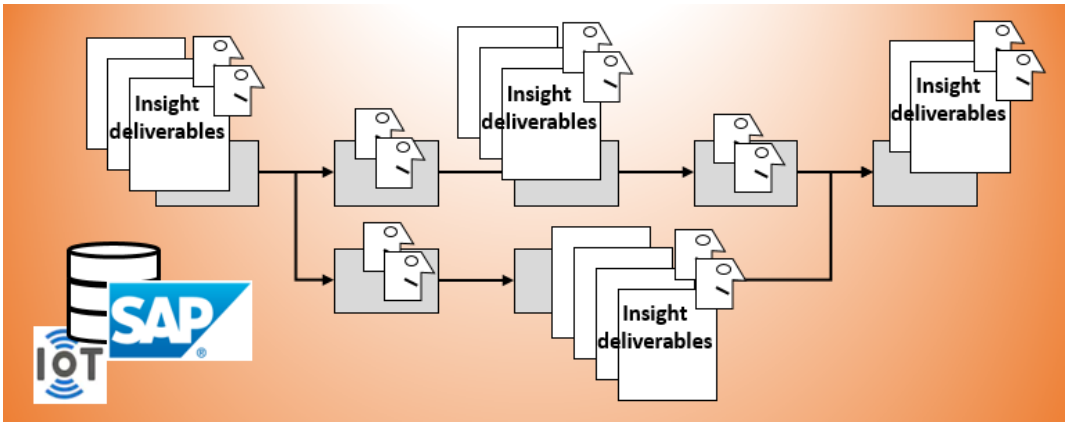

Training Session Description

First Step to Becoming a Data-Driven Operation

Richard G. Lamb, PE, CPA, ICBB; Analytics4Strategy.com

A “data-driven” operation is defined as one that harnesses its operational data to augment the experience and judgement of operatives, managers, analysts and engineers as they plan, organize, conduct and control their processes.

The first step to becoming a fully data-driven operation is that process role holders must reach a clear, implementable understanding of data-drivenness. With the understanding, the attendees’ organization will be able to layout their implementation plan to reach the vision and as the plan unfolds be ready to absorb, hands-on, the introduced methodologies. The purpose of the training session is to be the first step.

To make what is possible readily doable by the attendees, the session presents the principles and practices of data-drivenness in context of “critical-mass.” Critical mass is defined as the threshold set of knowledge, skills and software that must be in place to be fully, effectively and efficiently data-driven. Accordingly, critical mass and has the following characteristics:

Knowledge and skills exercised across critical-mass-improved operations are largely inclusive; they travel to up-teched and up-scaled strategies.

Up-teching from critical-mass software (triad of R, MS Excel-Pivot and MS Access) will not practicably increase the power of the insight that is extracted from the operation’s data.

Can be the grassroots of change culminating in a global organizational ability.

Agenda

The agenda is as follows:

- Purpose of the training session.
- The big picture of data-driven operations.
  - Definition and depiction of data-driven operational processes.
  - The cost-free “Critical-mass” strategy for reaching data-drivenness.

    - Jargon of data science reduced to relevance to data-drivenness.
- Structure of methodologies.
    - "R"—as the analytic core of data-driven capability.
    - Gather, join and cleanse data, and form super tables.
    - Eliminate fused data from operations
    - Layered charting in contrast to conventional charting.
    - The primary types of Insight deliverables—system reports, know-thy-data, recountive and indicative.
- Generalized implementation plan.
    - Big picture of implementation.
    - People—the central issue for development.
    - Stages, steps, actions and deliverables.
- Library of what-to and how-to papers, presentations and texts.

Who Should Attend

Because the session is to be the first step to data-drivenness for the audience organization, the following role holders to the subject process should attend:

Managers: To know what to ask for of their operations, managers must know what is possible with its operational data, as well as, be able to assess how well their operation's role holders are working with data.

Operatives, analysts and engineers: Those whose roles in operational processes involve working with operating systems and Excel. They will need the skills to remain relevant into the future and are in the best position to have immediate ideas to improve the effectiveness and efficiency of the tasks they are responsible for. Furthermore, these people can be looked upon to subsequently train others in the methods of the session.

Others: The subject is relevant to everyone's future. Accordingly, anyone will find ramifications for their own and their organization's future.

Session Length

Four hours.

Course Materials

The attendees will receive an electronic copy of the session slides. In the slides there will be considerable references (some immediately called up by link) to deeper explanatory papers and texts they will use as guidance upon becoming hands-on in methodologies.

Instructor

In 2003 Richard Lamb was called upon to build a dual-dimensional budget and variance control system for a refinery's maintenance operation (see papers on webpage "Cost Control and Finance"). While struggling to get at the historical data captured in the CMMS he needed to determine the workload and resources necessary to maintain the refinery, he discovered that

he could readily reach into the refinery's CMMS for its data and join them in super tables. Since then the Richard has made the discovery as a standard to his work for operational excellence. Along the way he has observed how few people know the easy, exciting skills of extracting and joining data into super tables that otherwise do not, cannot and will never exist in their systems.

In 2014, the instructor began to sense that software—one being free to all—was emerging to not just pass data through to facts but also pass data through analytics and gain insight we could not have before. The sense of something new kicked off what became an intense five-year quest to determine and frame what was newly possible so that it could flow as something tangible into the mainstream of operational excellence.

The result was to discover that bar of what is operational excellence had been raised by the readily obtainable ability to be data-driven. This has greatly strengthened his acumen of almost 40 years as an adviser in business strategy, finance and operations, including almost 30 years with maintenance and reliability, and preceded by 6 years as a manager of complex civil engineering projects. This has also pushed Richard to become an activist to help others recognize and move into what can be new age for their career and, as they do, being hugely consequential for their firms and industries.

Richard is a Registered Professional Engineer and Certified Public Accountant. He has published two books presenting new ideas for reliability and maintenance management framed in business strategy: Availability Engineering and Management for Manufacturing Plant Performance, and Maintenance Reinvented for Business Performance. He has a BSCE, BBA and MBA from the University of Houston and a graduate-level Applied Statistics Certificate from the Texas A&M University.

To navigate to download copy of session slides