



The Need for Process Analysis

Informatics technology can help to facilitate improvements in laboratory efficiency, compliance and throughput. However, without a fundamental review, analysis and simplification of data and information processes *before* technology is deployed, such systems can have a *negative* effect on laboratory operations.

Best practice organizations use technology to *support* process change. These organizations research and analyze "*as is*" processes first, looking for information bottlenecks and opportunities for process simplification. They then re-engineer these processes to a "*to be*" state and develop requirements to this future state. The changes in the future state tie directly to the goals and strategy of the organization. Systems are piloted to the future state, looking for areas of additional simplification.

Our Approach

Based on several decades of experience, Atrium Research uses a structured approach to process analysis. Client involvement in the process is at many levels. Not only should management be involved in the discussion; users know the current operations intimately and can help to derive the current situation. Many times they have first-rate ideas for the future state. There are many ideas an organization often has to improve a process, but these are not consolidated in a fashion where they can be prioritized and acted upon. This is called capturing "the voice of the customer."

Initially, we interview all those who own a process, or the *stakeholders*. Stakeholders are typically direct business line management, executive management, regulatory, records management, quality assurance, and information technology. We review their visions, needs, concerns and goals and objectives tied together in a comprehensive data management strategy.

Next, *focus groups* of key users are assembled. These sessions (also known as a "workout session") are used to research the day-to-day details

surrounding a process. Interactions between groups and other processes are explored. Bottlenecks or breakdowns in procedures are examined. Areas of improvement opportunity are highlighted. A single session typically lasts from three to four hours with eight to twelve individuals. The number of focus groups engaged depends on the span of the process.

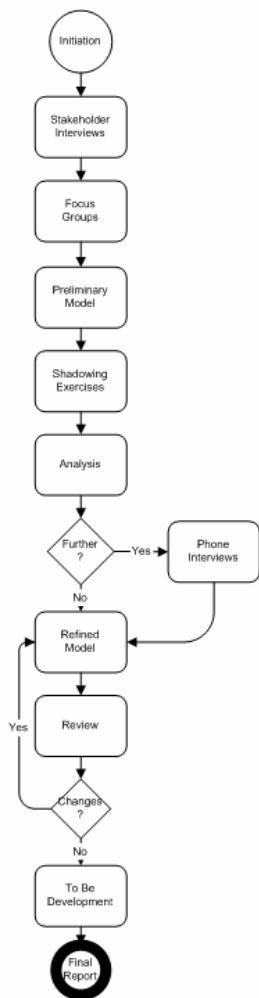
After careful modeling of the research obtained, we develop a list of additional information that is required for the *As Is* State. To examine these questions in more detail, *shadowing* exercises are performed with the target audience. In shadow sessions, individual users are observed in their real time work environment. Usually, these shadow exercises take from two to three hours each, and the number of personnel involved is dependent on the extent of the project.

The process model is then further refined. If additional questions remain, these are answered via phone or in-person follow-up interviews. If the population is large and baseline metrics are required, an *electronic survey* will be sent to all personnel involved in the process.

The *As Is* State is then analyzed for areas of improvement with consideration of the organizational vision and strategy. Macro and micro issues are documented and process change proposals are highlighted. A meeting with project sponsors follows to discuss recommendations - usually with fit to operational goals or barriers that cannot be addressed due to project limitations or scope.

After agreement, a streamlined "To Be State" is created. This new process highlights the required operational alterations, modifications of current data flow, risks, the functional requirements of the supporting informatics architecture, and recommendations on the phased implementation. Operational improvements due to process change (i.e. data quality, experimental throughput, etc.) are documented in the baseline report.

The To Be State is reviewed with key project sponsors to gain consensus.



Simplified Atrium Research Process

Use of BPMN

Atrium Research uses the industry standard Business Process Modeling Nomenclature (BPMN) for the creation of our process maps. BPMN documents the processes and the flow controls to define the order in which they are performed. BPMN uses *Events* and *Messages* to show the relationships of activities involved with sending or receiving a message between responsible groups. It is our view that BPMN is the best format for relaying laboratory processes in a manner that the majority of users can understand versus more complex methods such as Petri Nets (for more, see: www.bpmn.org).

Why Atrium Research?

Atrium Research is the only market research and consulting organization dedicated to laboratory informatics. This makes us uniquely positioned to provide the services needed to help successfully achieve project objectives.

- Experience:** We have seasoned professionals who have been in laboratory informatics over 25 years. This provides our clients a unique insight unparalleled in the industry. Not confined just to technology know-how, we have the business management and laboratory expertise to provide a proper balance and perspective.
- Supplier-Neutral:** We do not perform implementation services of vendor products. These services are best provided by companies who are closely aligned with a supplier and this tight linkage affects impartiality.
- Knowledge:** Through our market research efforts, we spend significant time reviewing vendor software, examining best practices, learning from market failure and success, and exploring industry trends. We pass this knowledge on to our clients. Our connections in the industry offer a market insight found no where else.
- Not limited to LIMS:** There are many LIMS consulting organizations. However, there are very few that have experience with ELNs, data acquisition, SDMS, ECM, cheminformatics, and other laboratory software technology. We bring a broad perspective about finding the *right* solution to requirements, not just what the company knows.
- Affordable:** Versus the big consulting organizations, we focus on quickly and affordably achieving project success.