METHODOLOGY & THE CHANGE PROJECT: OPTIONS FOR THE BUSINESS ANALYST

The origins of Total Quality Management (TQM) and *Six Sigma* lie in the manufacturing sectors, which have given the toolset and analysis used a specific bias. Manufacturing focuses on products (physical, material goods), often on an assembly line. The flowchart, with its sequence of steps, is a strong metaphor for the flow of the assembly line. This contrasts with the provision of services (non-physical outputs), which are driven by a wider range of events (customer calls, environmental cues, legislative and other reporting requirements, etc), and for which the assembly line is an insufficient metaphor.

Today, projects implement change in turbulent and changing business, social and legislative contexts. A correspondingly dynamic approach is required for both project management and its associated analysis function.

There is no essential dis-connect between any of the core models used for managing change. That said, for change projects focused on the commercial, business, financial, transaction-based and information-based service sectors, the toolset offered by Structured Analysis augments the TQM toolsets, provides more options for tailoring the analysis to the requirements of the project, and may offer a simpler path to the physical design and build phases (particularly for computer applications).

Broadly speaking, elements of the DMAIC model from *Six Sigma* align to the structured System Development LifeCycle as shown:

Define	Measure	Analyse	Improve			Control
Analyse			Design	Build	Implement	Quality Management and KPI measurement

Figure 1: Alignment of the DMAIC and SDLC models

METHODOLOGY & THE CHANGE PROJECT

At an equally broad level, some aspects of the relationship between SIPOC and Structured Analysis may be seen as follows:

- SIPOC separates Suppliers and Customers into two different categories. However, because the same person, group or company can act as either or both, and have multiple roles, Structured Analysis considers them both as a class of project stakeholder, and refers to them as External Entities (External Entities transmit or receive from the business activity under study, and are otherwise out-of-scope). External Entities are mapped on the Context Level Diagram, and cascaded through from here to lower level diagrams. The Context Level Diagram documents unambiguously the scope of the business activity under study, and focuses on the business relationships.

- SIPOC separates Inputs and Outputs into two different categories. Structured Analysis considers them both as flows from one Store or Entity to another Store or Entity. Flows crossing the project boundary (scope) are mapped on the Context Level Diagram and cascaded through from here to lower level diagrams. Flows between sub-processes (internal to the business activity under study) are mapped using the Data Flow Diagram. This diagram documents the relationship between the various sub-processes, and the path of a transaction, a document, etc, through the business activity under study.

- SIPOC uses flowcharts to map a Process—the sequence of action within the business activity under study. So does Structured Analysis. However, rather than having one large flowchart for the whole business activity, each sub-process has its own flowchart: this flowchart documents the specific sequence of decisions and actions that are triggered by a specific event, and which are completed with synchronization of stores. The flowchart documents the business activity at the operational level.

Accordingly, in Structured Analysis, defining and documenting all dimensions of a business activity might require any of the following tools to be used, and cross-referenced against each other:

- Context Level Diagrams, Dataflow Diagrams, and Flowcharts,
- Data Dictionary, Entity-Relation Diagrams, and Navigation data
- State Transition Diagrams, Scenarios, and Quality Models,
- Project Objectives, and Benefits Analysis

Key elements of TQM that are not adequately stressed in the traditional structured approach to change projects include:

- Focus on facts: measurement and experimentation replace folklore and opinion

- The cyclical approach of continuous improvement. This is implicit but not made explicit, and accordingly traditional projects can appear linear and monolithic.

- Routine use of pilot implementation. In structured projects this is an option, but is not always used.

The PDCA model from TQM may be aligned with the classic System Development Lifecycle as follows:
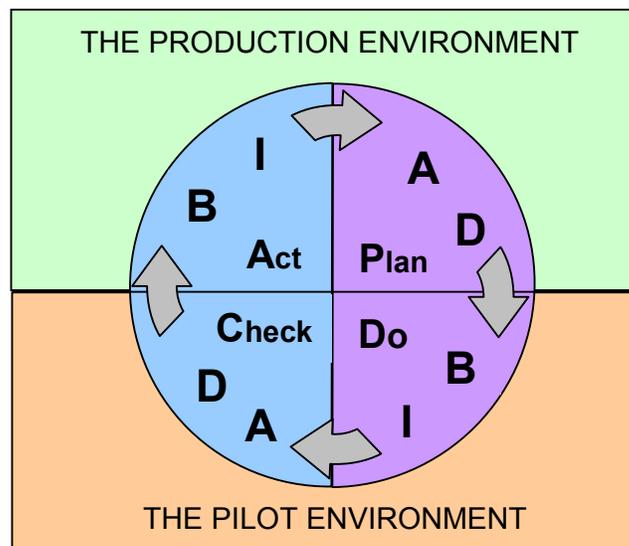

Figure 2: Alignment of the PDCA and SDLC lifecycles

www.blackcircle.com.au

METHODOLOGY & THE CHANGE PROJECT

Core to the integration of Structured Analysis into Project Management and to the successful contribution of the Business Analyst in delivery of change are the following principles:

- Iterative analysis, at deeper and deeper levels each iteration, and with management approval of the project at each iteration

- Conceptual analysis undertaken before physical design issues are considered. This is a key distinction made by Structured Analysis that is not necessarily shared with many TQM models. This crucial concept enables early quantification of benefits and thus allows go/no-go decisions to be made significantly earlier

- The current business model is mapped and the problems and opportunities therein understood before proceeding to develop the proposed models. Accordingly, the changes in the proposed model (new or varied flowcharts, flows, stores, etc), are completely explained by reference to the business objectives, which are to address the identified problems and opportunities.

- Highly complex business activities are made understandable through step-by-step dissection of the business activity on different dimensions

- Re-use and re-cycling of analysis tasks and outputs to minimize re-work

- Use of a variety of graphic tools to meet the communication needs of different stakeholders

- Structured documentation of all aspects of the analysis as a professional behaviour, to assist the project manager to manage the risk of key-person dependency

- Working as a team

- Integration of Quality Assurance into the analysis as a professional behaviour

In common to both Structured Analysis and TQM concepts, is a focus on whole-of-life. The core outputs from the analysis function are twofold: first is the Business Requirement Specification, which documents WHAT is required; and second, documenting WHY the project should proceed, is the matching Benefits Realisation Plan