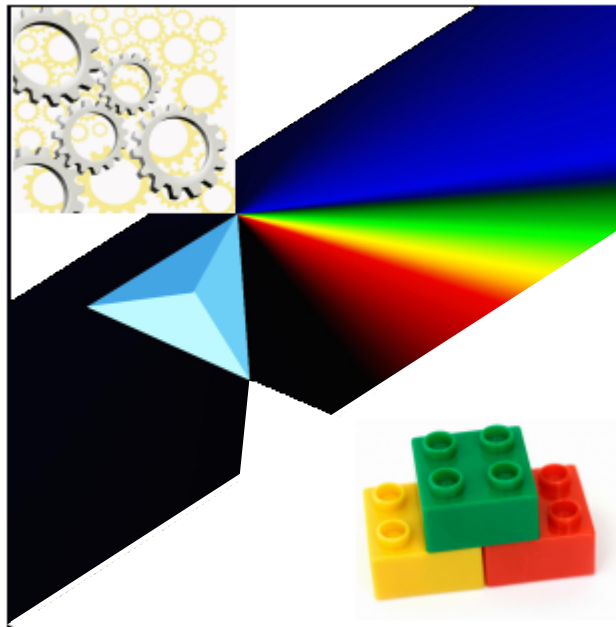




# **SMART**



**Solutions in Manufacturing through  
Adaptive and Re-configurable Technology**



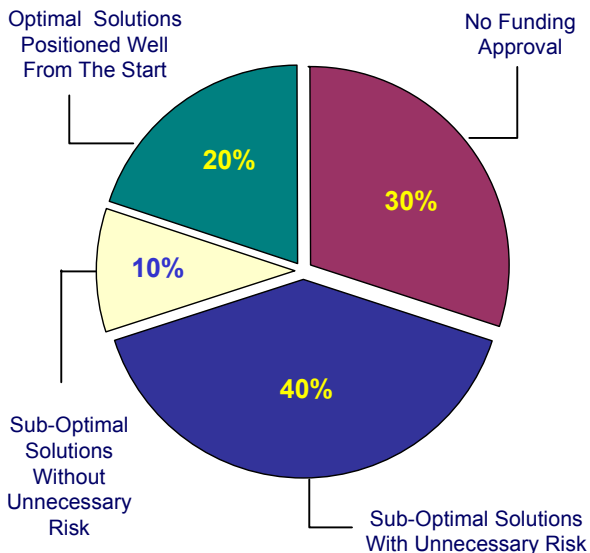
***Integrated Factory Automation Solutions  
Enhancing Productivity and Capital Asset Performance***



## THE PROBLEM

Having been in the factory automation business for 30 years, our experience has taught us that all projects start well intended but:

- ❑ 30% waste time and effort that result in no funding approval!
- ❑ 40% are based on sub-optimal solutions that compromise ROI by as much as 50% and are exposed to unnecessary (preventable) risk.
- ❑ 10% are based on a sub-optimal solutions without exposure to unnecessary risk.
- ❑ 20% are based on optimal solutions and are well positioned from the start.



## SOLUTION



**From our experience this is an industry-wide problem that typically results from multiple causes:**

- ❑ An automation solution that met what the customer asked for, but not what he/she needed.
- ❑ Missed opportunities to improve the process before the automation solution was designed/delivered.
- ❑ Multiple ECNs after the project has started.
- ❑ Bumpy implementation without full user ownership
- ❑ Scope creep that impacts the budget adversely.
- ❑ Project delays and missed deadlines.

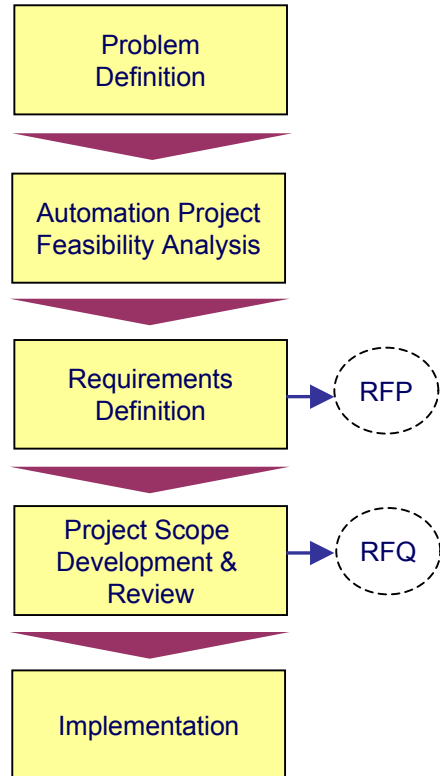


## THE ROOT-CAUSES

Examining the root causes of the the problem we have found that most issues arise upstream in the planning stages of the problem-solving process and specifically, from:

- ❑ Lack of adequate problem definition (goals, objectives, un-validated assumptions) and lack of a proper feasibility analysis that will justify the investment.
- ❑ Pursuing an RFP or RFQ prior to adequately defining the project requirements
- ❑ Not defining value-adding project priorities
- ❑ Project scope omissions or conflicts
- ❑ Pursuing an RFQ as opposed to an RFP when defined requirements become over-restrictive preventing solution innovation.

### Typical problem-solving steps in capital automation projects:



Unquestionably, there are also execution-related issues that may impact a capital project, however most of these issues could have been prevented in the planning stage. Most execution issues arise from inadequate resources, project management and lack of senior management focus. Occasionally, suppliers who are eager to win an order without being properly equipped for the specific task can miscalculate the implementation effort resulting in over-promising and under-delivering.

The single most important element that enables project success is the understanding of the problem-solving process itself and the adherence to sound practices along each step of the process.

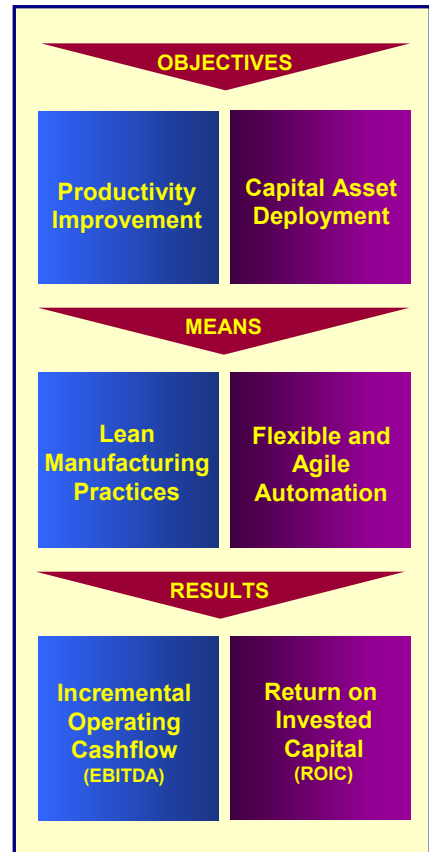


## THE *SMART* SOLUTION

As a response to a wider industry problem WTAS has developed and made available to its customers the *SMART* methodology framework. This methodology is based on the WTAS internal processes, know-how, and many years experience.

*SMART* goes a step beyond the traditional approach to the manufacturing engineering requirements definition and CAPEX analysis. Specifically, it addresses the means of every automation capital project from the perspective of striking the optimal balance between best practices in manufacturing and automation.

- ❑ *SMART* is the WTAS framework for the development, and delivery of re-deployable automation solutions that maximize ROI.
- ❑ *SMART* addresses all aspects of manufacturing operations (assembly, machining, inspection, testing, etc.).
- ❑ *SMART* leverages the customer's technology and prior capital investment through adaptive (standard and modular) and re-configurable engineering designs.
- ❑ *SMART* implements best practices in Concurrent Engineering and Project Management.
- ❑ *SMART* supports Flexible Manufacturing to address quick-changeovers and post-implementation process management.
- ❑ *SMART* promotes Agile Manufacturing by re-deploying automation assets beyond the life-cycle of an automation project.



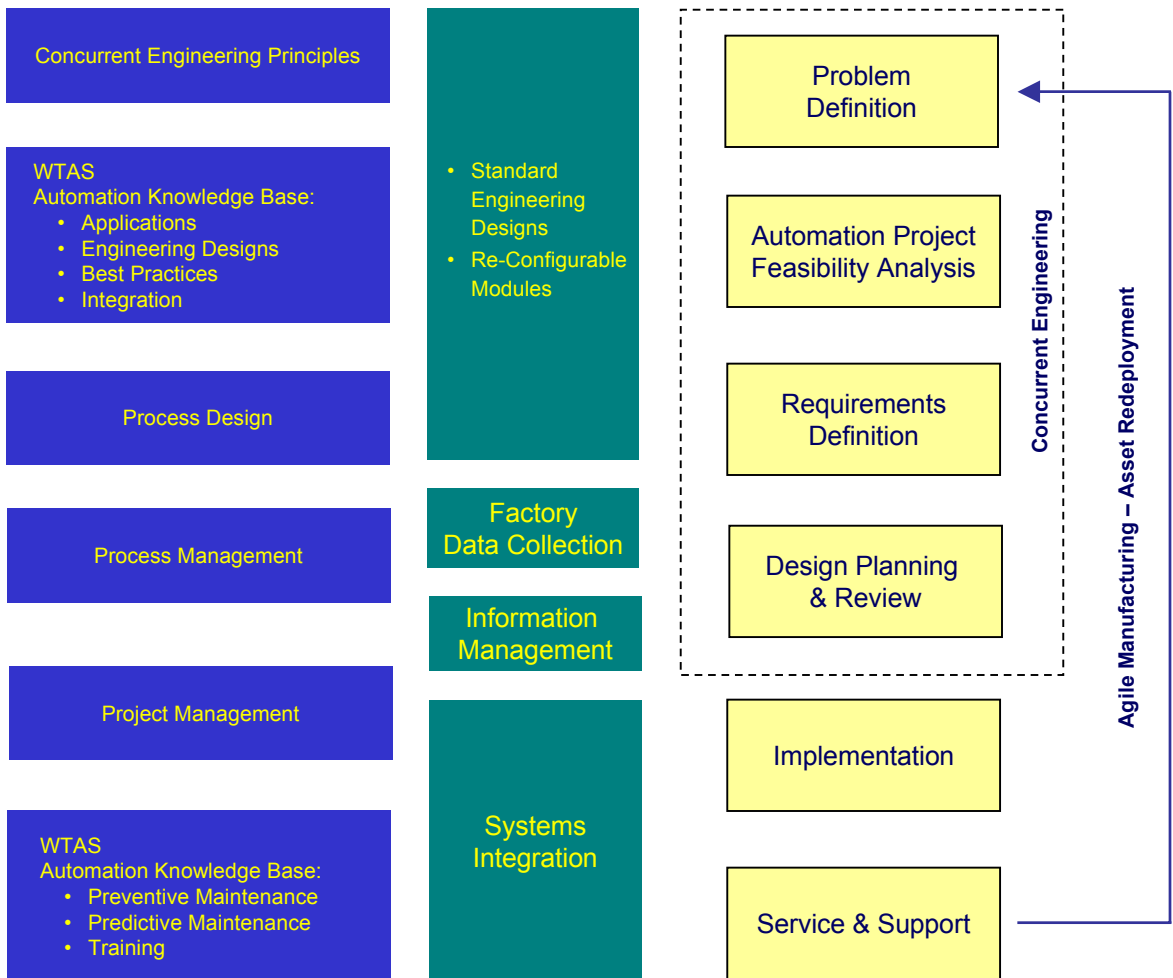


## THE SMART FRAMEWORK

The *SMART* framework depicted below essentially combines all the best practices and knowledge requirements (*SMART* elements) for executing every step of the problem-solving process (*SMART* process). *SMART* is a “blue-print” to be used jointly between WTAS and its customers. It is intended as a complement to the customer project team. WTAS expert, technical resources team up with the customer team to guide them through the *SMART* process steps with the goal of arriving at the best solution for their needs.

### SMART Elements

### SMART Process





## THE *SMART* BENEFITS

### **Deployment Time: One deployment...the right one!**

- ✓ Faster time to market which results in increased market share.
- ✓ Faster reaction time in responding to the rapidly changing market.
- ✓ Increased positioning in a highly competitive world market.

### **Product Development Process & Launch**

- ✓ Ability to design right the first time.
- ✓ Reduction or elimination of the number of design changes and re-engineering efforts.
- ✓ Lower product and process design & development costs.
- ✓ Increased effectiveness in transferring technology.
- ✓ Increased customer satisfaction.
- ✓ Proper product data structure and information collection and management.

### **Process Design and Automation Solution Deployment**

- ✓ Increased innovation by having all experts and stakeholders participate in the concept development phase.
- ✓ Lower manufacturing and production costs.
- ✓ Improved quality of end products.
- ✓ Increased efficiency and performance.
- ✓ Reduced defect rates.
- ✓ Lower implementation risks.
- ✓ Ability to recognize necessary design changes early in the development process.
- ✓ Improved inventory control, scheduling and customer relations.

### **Project Management**

- ✓ Ability to execute complex projects while minimizing the difficulties.
- ✓ Improved communication between experts, managers and departments.
- ✓ Increased cohesiveness and ownership within the customer environment:  
Team Approach Shorter design and development process with accelerated project execution.
- ✓ Higher return on investments.
- ✓ Increased accuracy in predicting and meeting project plans, schedules, timelines, and budgets.
- ✓ Reduced labor and resource requirements.



For More Information Contact Your WTAS Representative

## Integrated Automation Systems

- Assembly/Test Systems
- Manufacturing Systems

## Technologies And Products

- Conveyors
- Gantries
- Machine Loaders
- Lean Cells
- Robot Integration

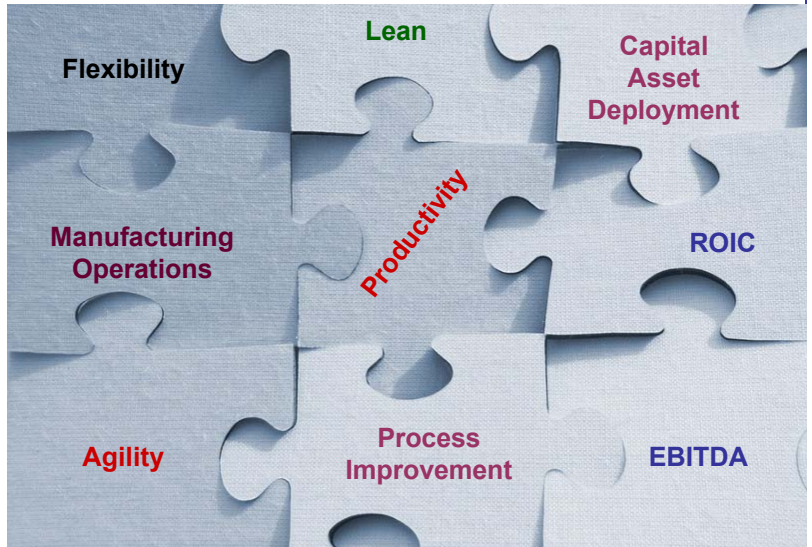
## Build To Spec Capabilities

## Consulting Services

- Lean Manufacturing
- Mechanical Engineering
- Controls Engineering
- Project Management

## Service & Support

- Training
- Maintenance
- Retooling and Refurbishing



## Solutions: Piecing Together The Puzzle

