

# Preface

This book was inspired by what the authors have learned from the ISA Mentor Program. As guides for ten (10) talented and enthusiastic individuals, we have developed an appreciation of how formidable is the challenge faced by new engineers. Success in the automation profession depends on each engineer's being able to deal with largely undocumented user knowledge, an incredibly diverse range of applications, vast quantities of un-analyzed data, and expertise increasingly residing outside of the plant. In a creative, concise format, this book seeks to provide perspective, understanding, direction, and guidance on what has been, and will be, important for an engineer's advancement in an automation career. Growth in skills and knowledge is important to your company, to this profession, and to you in terms of promotion and marketability.

This book captures 101 of the most important ideas learned through more than 60 years of application experience by the authors. To increase effectiveness, each Tip includes a concept to extend applicability, critical details and watch-outs to prevent failures, a key insight to increase understanding, and a rule of thumb to provide a concise straightforward step. The book provides extensive practical information not found in the literature. Generalization in the concept, insight, and rule thumb is offered to enable you, the reader, to see the commonality in applications and build on knowledge gained.

The authors' backgrounds, skills, and knowledge complement each other to provide a more complete picture. Hunter's emphasis is on successful automation project execution, whereas Greg's focus is on benefiting from the knowledge of experts and resources and using the best technology for measurements, valves, modeling, and control.

Projects, in general, and process control improvement, in particular, are team efforts that depend, in large part, on the human factors of inspiration, motivation, and prioritization. In addition to technical expertise, the Tips offer ways to increase your skills and performance in interpersonal relationships, the shaping of attitudes, and the how and why of purpose-driven conversation. The book is designed to help you to achieve success in a given task and to get the recognition deserved, which will open the door to career advancement and expanded access to resources for future opportunities.

The book's cover captures the essence of the journey of the individual in a career. Each tip is a step to a higher level of achievement. The individual can see a door to openness, freedom, and perspective at the top of the automation profession for attaining the highest level of plant and personal benefits.