This booklet is written chiefly for three groups:

- The planner of logistical networks
- Team members involved in a network planning project
- The team leader, teacher, or facilitator for those doing the planning

This booklet presents an organized, proven method – always helpful. We have found this process to be highly effective for first-time network planners, for those invited to be involved in the planning but don’t know how, and for those who may be skilled at applying network analysis tools but need a clear guide on how to successfully complete a network planning project.

This booklet includes six specific steps. It tells how to conduct a successful network planning project. It provides a carry-through case example. It gives you working forms to use. And it gives numerous other explanations and specific cases.

Most network planning involves modeling. You cannot model logistical networks without software – often a specialized program using some form optimization software. We assume that you have such software and know how to use it. This booklet and method address the questions of how to organize, plan and conduct network planning projects in which modeling software will be used.

Simplified Systematic Network Planning (Simplified SNP) is especially helpful when:

- Network planning is new for you or your company and you need a standard process.
- Your project is small or a sub-project of a larger network plan.
- You want faster project start-up with less confusion on purpose, scope and approach.
- You want to finish on time or early without delays, excessive iterations and rework.
- You want visualization of the network being modeled, with clear and explicit diagrams.
- You want accurate modeling that predicts savings close to actual results.
- You want effective involvement of operating personnel and acceptance of recommendations.
- You want effective communication and documentation of the network model and outputs.
- You want to present several viable alternatives to your management.
- You want to choose your network plan based on all factors, economic and intangible.

Systematic Network Planning (SNP) is based upon the High Performance Planning model developed by Richard Muther. As such, it represents an extension of his work and an application of his latest general purpose planning method: Planning by Design (PxD). Dr. Richard Ward, a leading educator in the fields of material handling and logistics, reviewed our method during its development and made helpful suggestions for our method and this book. We are grateful to both.

We sincerely hope this booklet will be of direct help to you and your associates.

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INTRODUCTION TO SIMPLIFIED SNP

Simplified Systematic Network Planning – typically termed Simplified SNP -- is a set of six procedures for planning logistical networks. It is suited to smaller projects that do not require the full SNP method.

Basically, every network planning project involves three fundamentals:

1. **Variables** to be defined: In logistical network modeling, a variable is any element of the model that can be changed or varied. Thus, "variables" include: network design characteristics, parameters, constraints, assumptions, formulas, and even data sources for demand, resources, and costs.

2. **Sensitivities** to be analyzed: The degrees to which model results are affected by changes to the model variables.

3. **Scenarios** to be created: Scenarios represent possible future states of a network. Several scenarios are modeled in the typical network planning project. Each is generated by making selected changes to a baseline network model.

The six steps of Simplified SNP follow these three fundamentals and the six steps from a pattern. The pattern may be symbolically indicated, as on the cover of this booklet, and is conceptually drawn here. Each of the six steps carries its own ease-of-recall symbol.

1. **Grid** – the scope of the project and its schedule.
2. **Arrow** – define variables that will drive the analysis.
3. **Bell Curve** – analyze the sensitivities of variables.
4. **Stack of sheets** – scenarios for alternative plans.
5. **Pentagon** – consider all sides; evaluate all factors.
6. **Rectangle** – the implementation plan.

Each of these six steps will be explained in the following chapters. Each chapter follows the same arrangement. A single case example follows through all six steps – on Page 2 of each chapter. Supporting information is shown on subsequent pages of each chapter. At the end of the booklet are three complete six-step examples. There also, you will find a blank set of the working forms.

The follow-through (or carry-through) example, on Page 2 of each chapter, shows how to perform each step. It involves finding the best existing location at which to upgrade a bottling production line for increased capacity.