Energy Efficiency . . .
Process vs. Program

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Discussion Outline

• Introduction
• Topic Definition
• Case Study Example
• Concluding Remarks
Introduction

• **Pfizer** – The world’s leading producer of pharmaceutical products . . . With Kalamazoo, MI as it’s largest global manufacturing facility (Formerly known as Upjohn and Pharmacia)

• **Armstrong International** – A 104 year old, privately held, global company focused on delivering Intelligent System Solutions for Steam, Air and Hot Water Utilities. (Providing Products to Providing Utilities)
Definition

- **Program** – A plan for a coherent sequence of incidents *(A start and stop!)*
- **Process** – A progressively continuing operation that consists of a series of controlled actions systematically directed toward a particular result
Process vs. Program at the Kalamazoo, MI facility

• In 1980’s, trap testing eliminated from the maintenance budget as a well intentioned cost savings (6000 steam traps) Program Ends!

• Armstrong performed pilot study (5 years later) with resulting economics justifying a budget from management
Process vs. Program

- Armstrong assisted testing and replacement of all 6000 traps and provided software for steam loss measurement

- First year savings: $479,000
  - Production time improved in some areas

- First year investment: $110,000 (all costs)

- Management created budget for future years from “fuel saved”

(The Process Begins!)
Process vs. Program

• Subsequent years Pfizer staffed one person to test and monitor traps

• Every year management realized a net positive cash flow from the “Process” (annual savings $50,000 - $100,000)

• Due to retirement, Armstrong provided the on-site technician for last 3 years with similar financial results

• Armstrong’s on-site technician also provides total steam system troubleshooting

• Over 10 years Pfizer/Armstrong have recognized more than $1,000,000 in savings from just this “PROCESS”
Other Pfizer/Armstrong Energy Initiatives

- Armstrong has gone on to provide complete steam system audits at Pfizer’s Puerto Rico and Italy facilities
- These audits have recognized an additional $1 million dollars in energy conservation projects
- Armstrong also conducted a turnkey implementation of heat pipes for “free” cooling for HVAC make-up air in Puerto Rico
Concluding Comments

Pick it ‘over’ again . . . the low-hanging fruit grows back!
Concluding Comments (cont’d)

• Develop **Processes not Programs** when dealing with energy initiatives

• Because many energy projects have attractive paybacks, **form partnerships with vendors** that can stretch your resources and accomplish your cost reduction objectives

• Remember . . . **Low-hanging fruit . . . Grows again!**
Other Armstrong Solutions

- Steam and Condensate System Optimization
- Hot Water System Optimization
- Process Air System Optimization
- Turnkey Project Services
- Energy Project Financing Services
- Operation and Maintenance Services
- Asset Management Services

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Pfizer/ Armstrong

“A Process Partnership”!