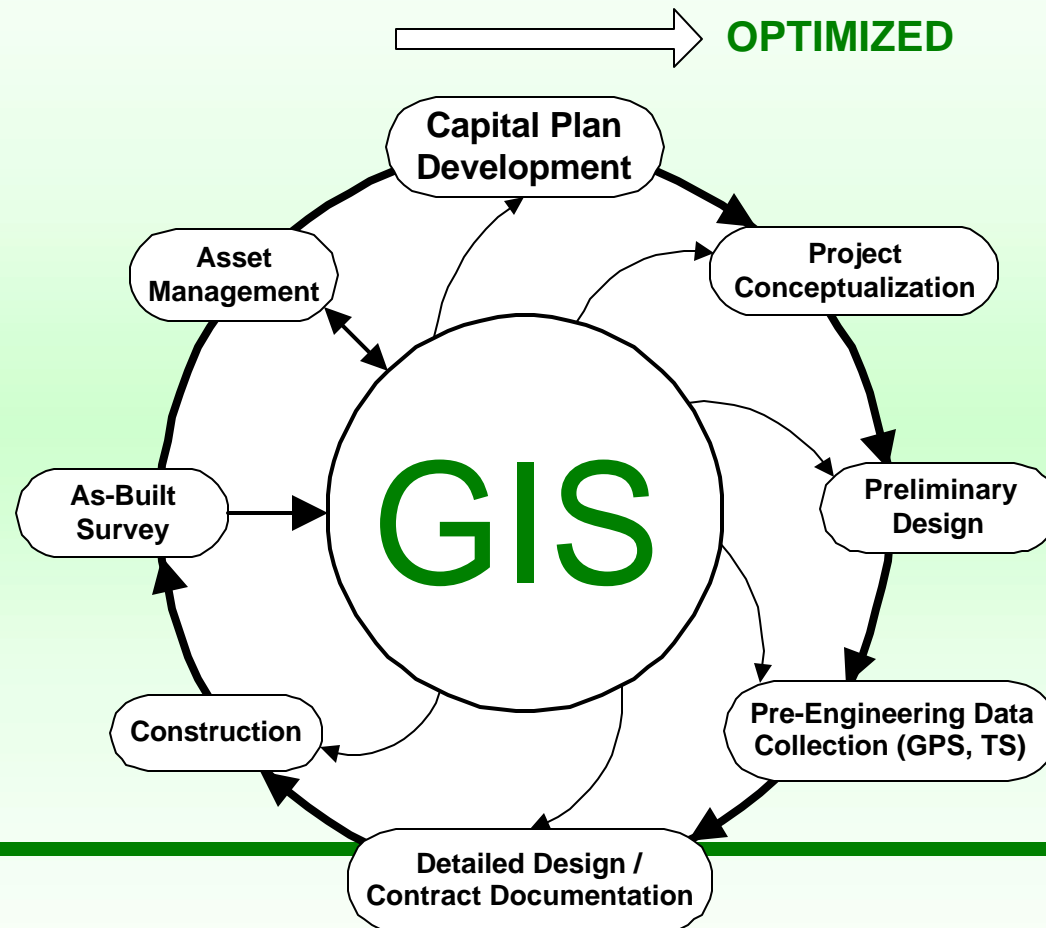


Business Process Re-Engineering

Getting the Most Out of Change

Andrew Walther, P.Eng.
APW Engineering Inc.
www.apwengineering.com

Capital Project Life Cycle



GIS: The hub around which the **Land Development Process** revolves

Process Survey?



Why?

- **Haphazard** business process evolution;
- Time to Get **Back to the Basics**
- Must **optimize** never ending technological expenditures;
- **Change is here to stay**;
- Private Sector – **profitability through optimization**;
- Public Sector – **fiscal responsibility**;



What?

- **Optimized** GIS integration;
- Business Processes – **project lifecycle**;
- Organization structure – **supports** the process;
- Employee roles – defined from technology needs;
- Intuitive **Standards** – software and processes;
- Project Data Filing - **supports** the process;
- Deliverable and handoff definition;
- **Sensible** software allocation;
- Contract Definition (private sector);



Who?

- The Corporation;
- Individual **Leader**;
- Information Services – GIS Managers;
- Engineering Project Managers / Department Heads;
- Everyone **directly involved** in the process;
- Surveyors, Designers and Technicians;
- Internal Process **Champions**;
- Consultants / Facilitators;



How?

- **Corporate Commitment;**
- Strategic Initiative;
- Process Appreciation (knowing what others do);
- Benefits understood by **everyone;**
- Plan for short, medium and long term improvements;
- Work backwards from **optimized** scenario;
- Redesign sessions;
- External **consultation** / facilitation;



Project Methodology

1. Needs Assessment
2. Recommendations to Improvements;
3. Implementation

Needs Assessment



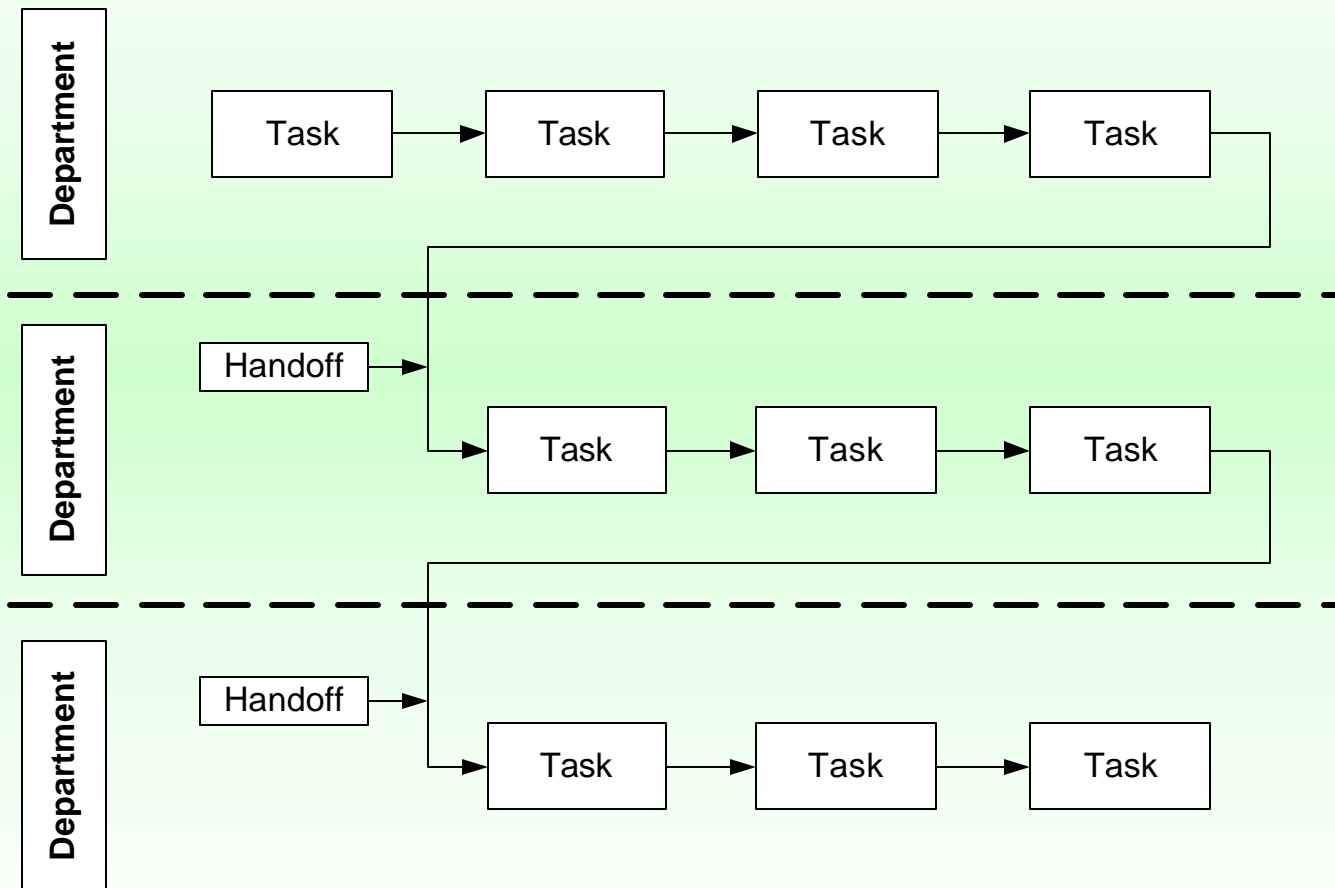
Moving GIS Into the Enterprise

- **People, Processes, Programs** – the current state of affairs;
- **Communication** - individual and group **meetings** and **discussions**;
- Existing Organization Structure – the **framework** upon which the process operates;
- **Existing Business Processes** – capital project procurement;
- **Standards** – accessibility, applicability and usage;
- Current **data management** practices – storage and handoff;
- Level of GIS **integration** and **accessibility**;

Existing Business Process

- **Definition** – “a collection of activities that takes one or more kinds of input and creates an output that is of value to the customer”;
- Move the focus from tasks, jobs and structures to business processes – **remove the silo walls**;
- **Existing Process Mapping** – identify individual tasks and graphically connect consecutively to portray project workflow against departments;
- Identify points of hand-off (vertical lines), duplicate/unnecessary tasks and overall workflow characteristics;
- Serves as the **foundation** for process redesign;

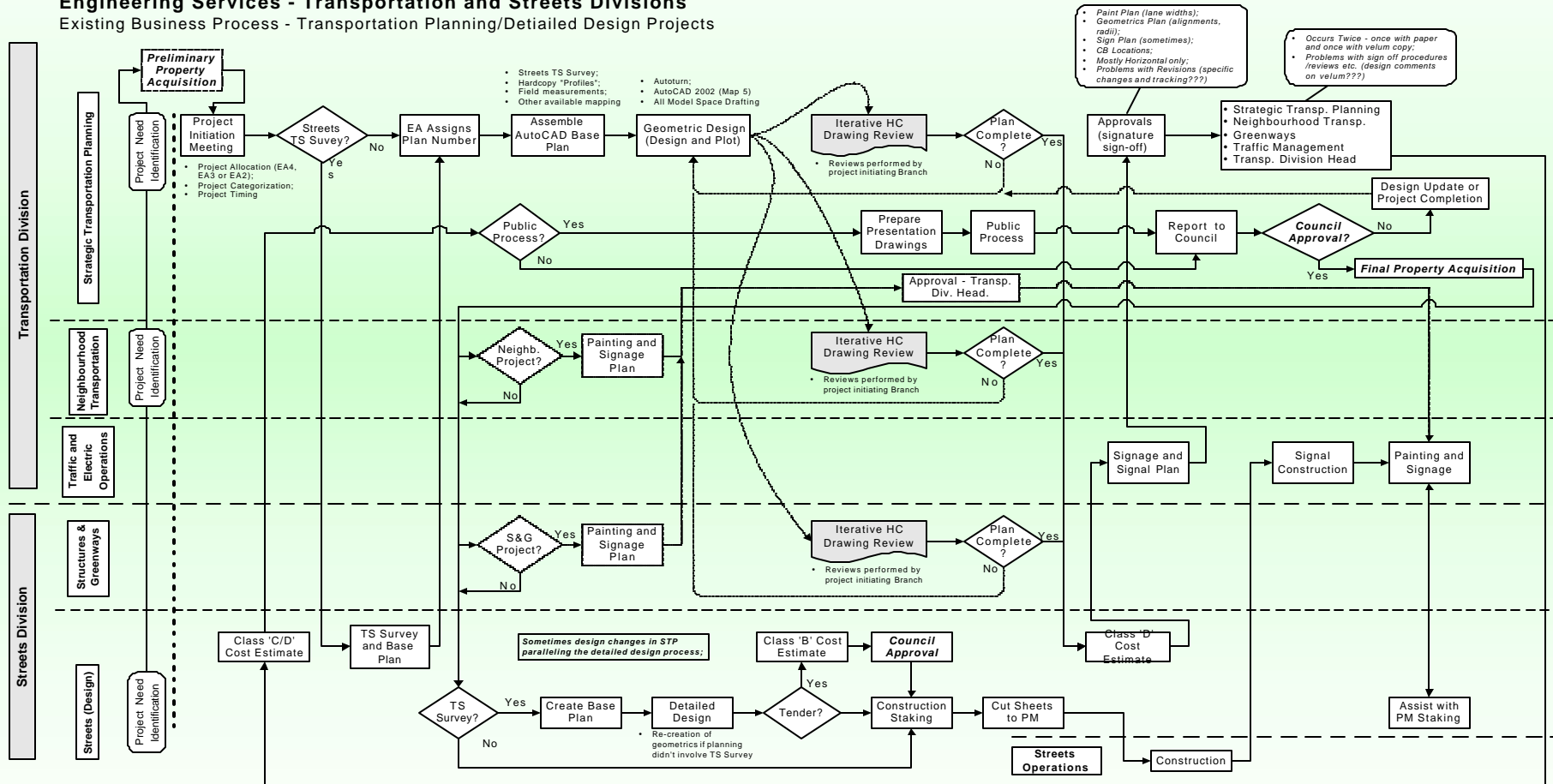
Process Mapping



Sample – Existing Business Process

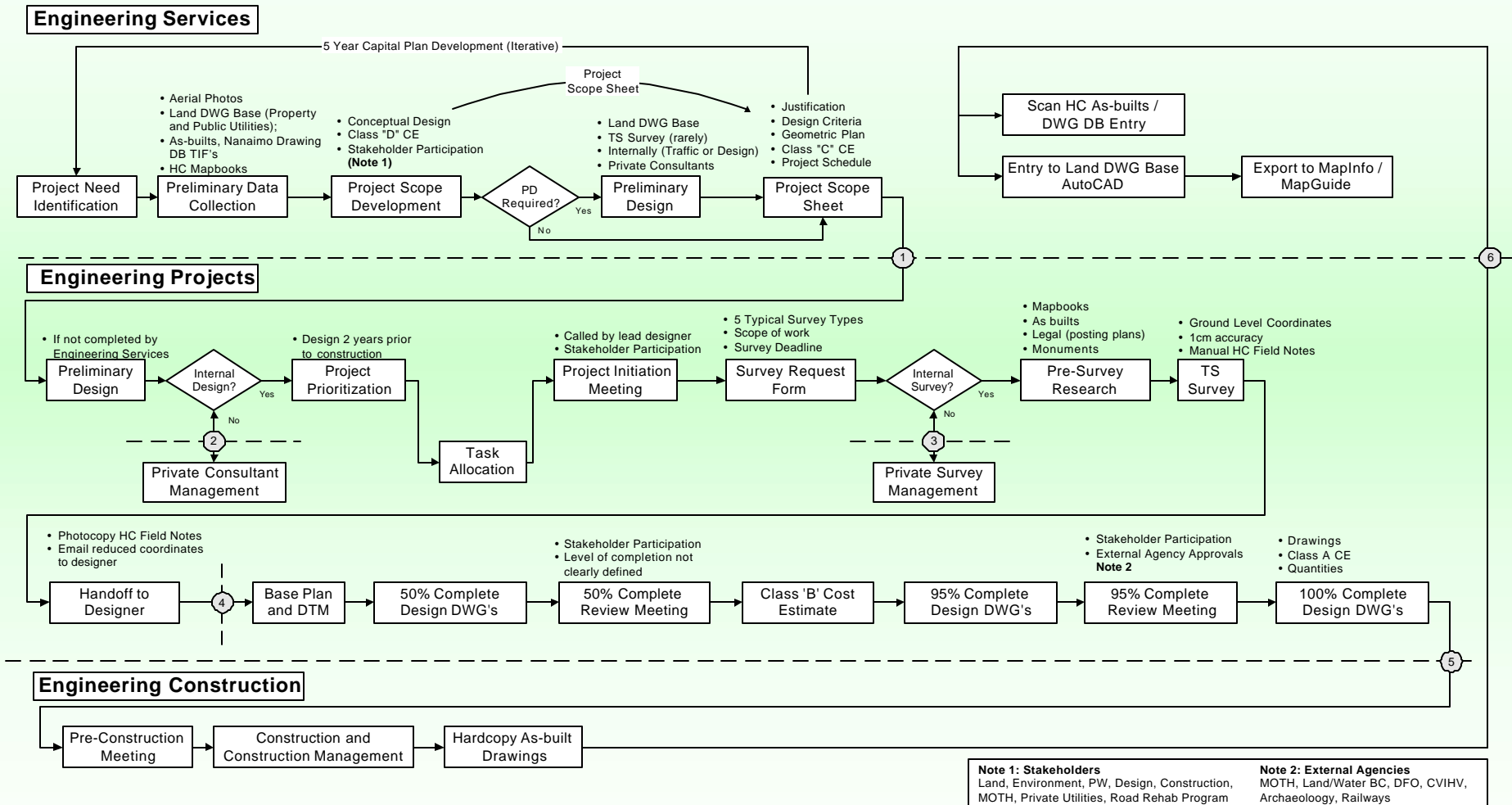
Moving GIS Into the Enterprise

Engineering Services - Transportation and Streets Divisions Existing Business Process - Transportation Planning/Detailed Design Projects



Sample – Existing Business Process

Moving GIS Into the Enterprise



Proposed Business Process

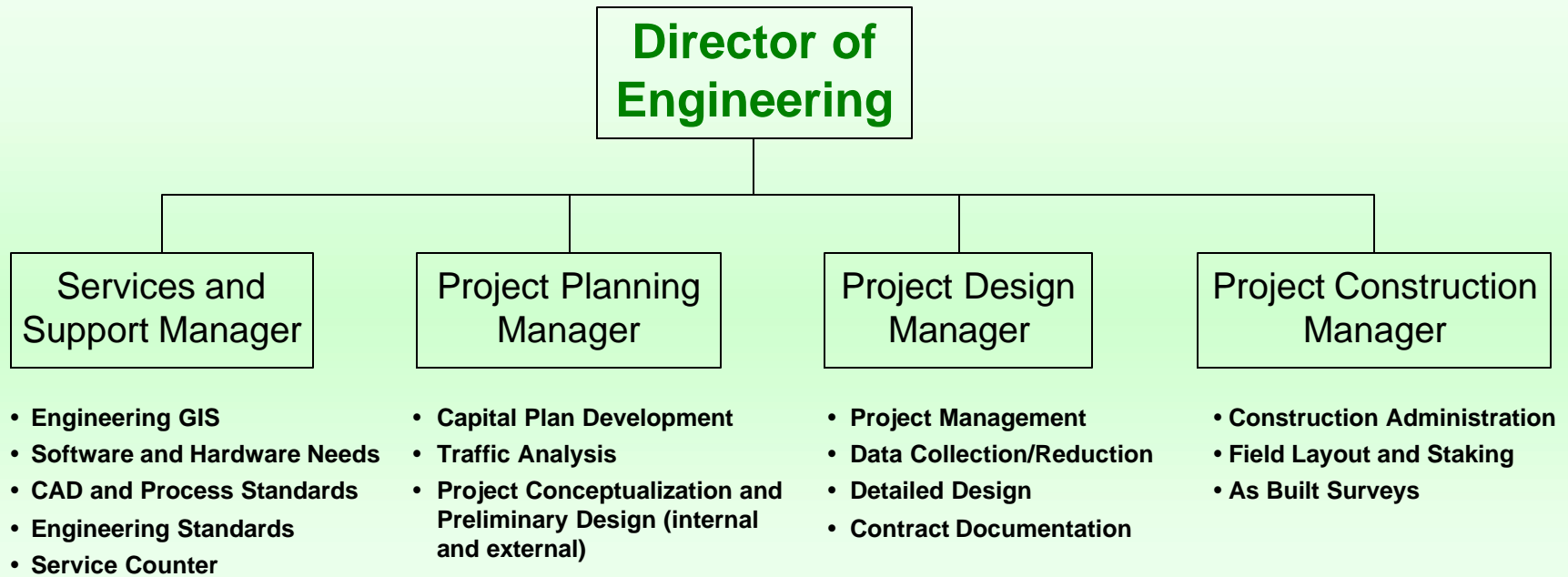
- Identify and focus on **one process**;
- Process is defined by the **needs of the technology**;
- Project data is **leveraged** through **all** project phases;
- Greater individual responsibility - **Task Integration**;
- Individual process steps occur in a **natural order**;
- Work is performed where it makes **most sense**;
- Reduced checks and controls;
- Introduce **Accountability**;
- Streamlined data flow – **eliminate the walls**



Organization Structure

- The **Structural Framework** upon which the process functions;
- Identify **inter-department** project relationships (handoffs);
- The organization structure must **support** the process;
- The organization structure must **support** the work of a team;
- Logical department structure with **clearly defined** roles;

Organization Structure

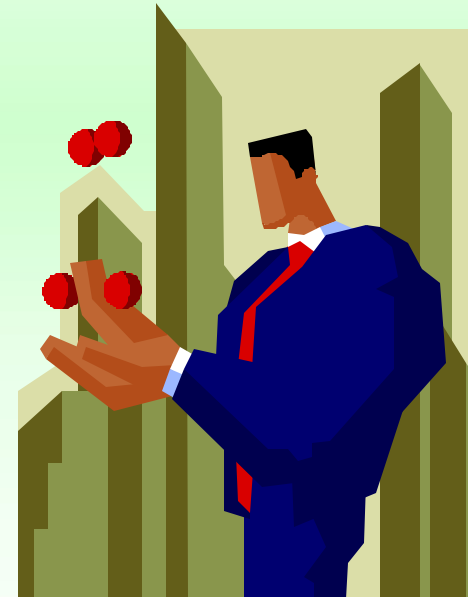


Process and Application Standards

- Standards represent the **Language** of the process;
- Where possible, processes should be standardized;
- Application Software Standards
- Data Collection/Reduction Standards;
- Design Standards;
- Contract Documentation Standards;
- Construction Standards;
- Data Housing Standards

Implementation

- Process changes do not happen overnight;
- Corporate commitment and process champions;
- Internally driven;
- Short term milestones;
- Medium term milestones;
- Long term milestones;
- The plan is subject to change;



Short Term Goals

- CAD Standards;
- Project data filing standards
- Refine data collection/reduction process;
- Business process education;
- Application training;
- Hardware and software upgrades;

Medium Term Goals

- Employee role definition;
- Electronic submissions
- As built surveys

Long Term Goals

- GIS On everyone's desktop
- Employee Role Definition
- Improvements to Organization Structure
- Remote survey crews (wireless data transfer);

Thank You!



Moving GIS Into the Enterprise

www.apwengineering.com

apw