Facility Planning & Management:

Building Information Management

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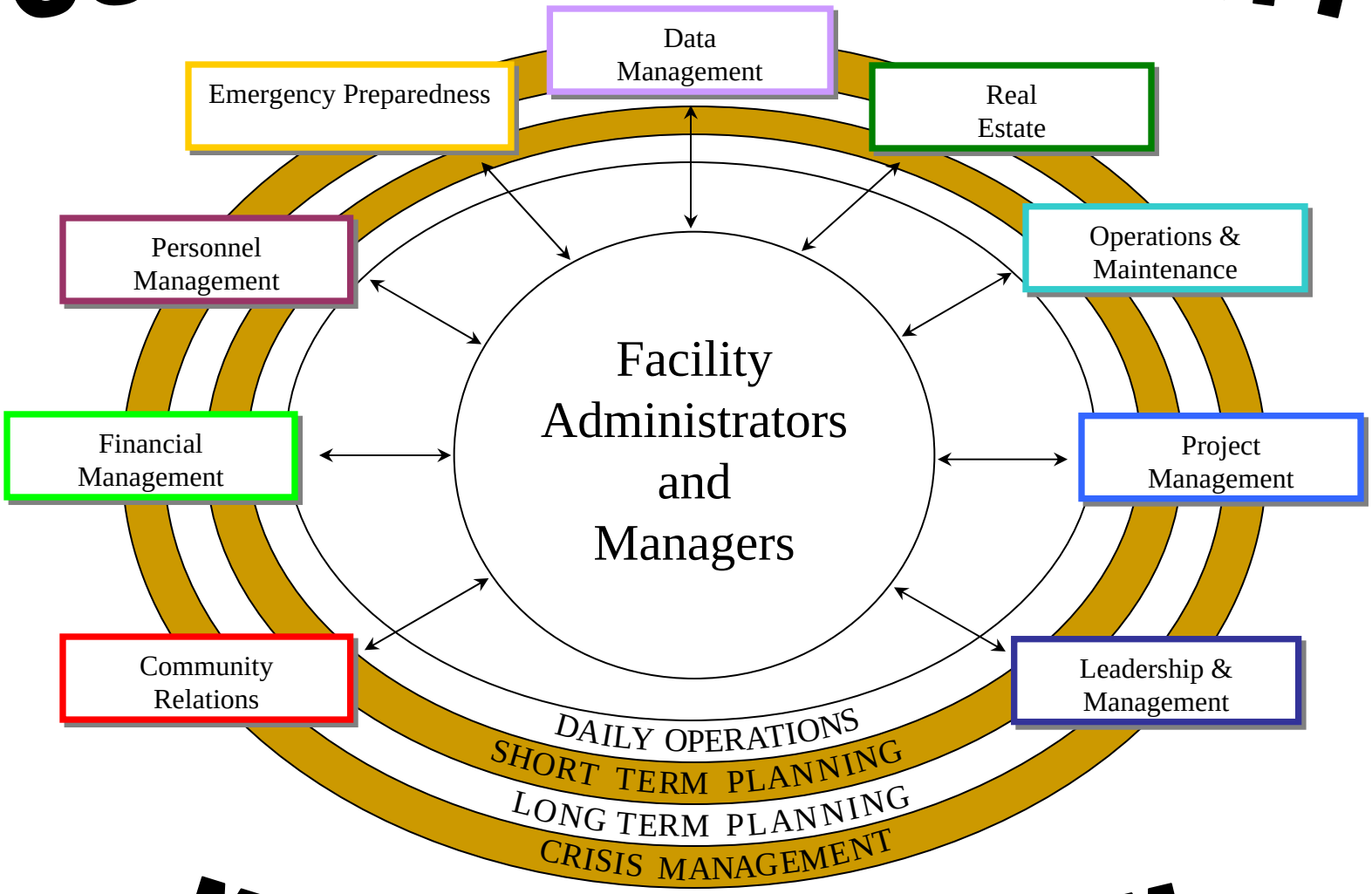
Food for Thought

- You can't manage anything if everything is a crisis.
- You can't do everything at one time, but you can do one thing at one time.
- That which is planned takes precedence over what is not planned.
- Plan ahead just don't plan the results.
- If you keep doing the same thing, don't expect different results.

A Facility Manager's Top Ten Responsibilities

- Operations & Maintenance
- Project Management
- Leadership & Management
- Finance
- Problem Solver
- Community/Political Relations
- Technology
- Real Estate
- Emergency Preparedness
- Comprehensive Long Range Planning

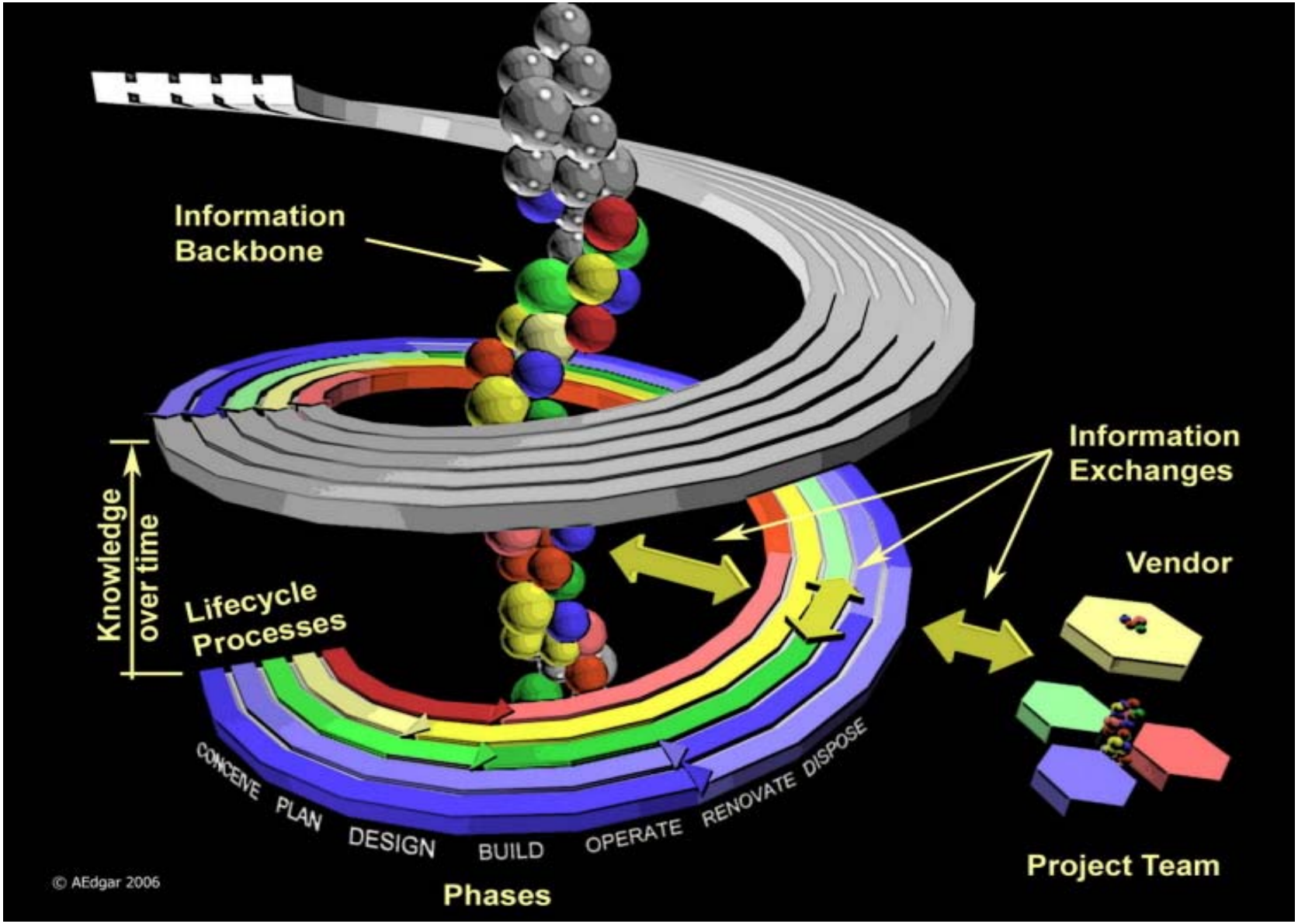
COMPREHENSIVE FACILITY MANAGEMENT SYSTEM



Building Information Management

- An approach to building design, construction and management:
  - Predictive project development
  - Operations & Maintenance
  - Space utilization
  - Capital assets
  - Long Range Planning

- Collect data once and then allow it to be used, improved, and passed along to others throughout the lifecycle of the facility
- Not a technology, however, it is supported to varying degrees by different technologies
- Collaboration


Information Backbone
Information Exchanges
Vendor
Knowledge over time
Lifecycle Processes
CONCEIVE
PLAN
DESIGN
BUILD
OPERATE
RENOVATE
DISPOSE
Phases
Project Team
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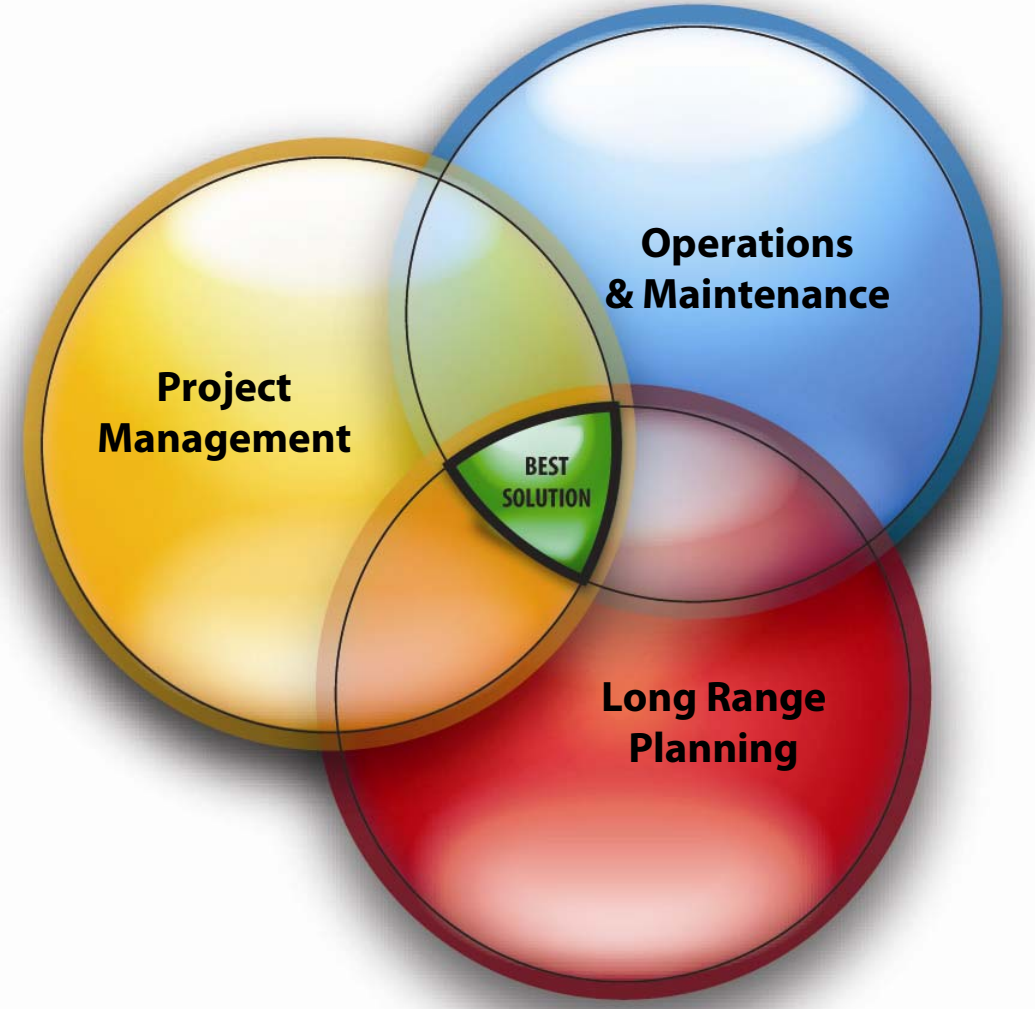
Building Information Management



Operations & Maintenance Management

- Micro Level Data
- Work order/request
- Corrective Maintenance
- Preventive & Predictive Maintenance
- Space Utilization
- Energy Management
- Asset Management
- Computerized Maintenance - Management Systems (CMMS)
- Computer Aided Facility Management (CAFM

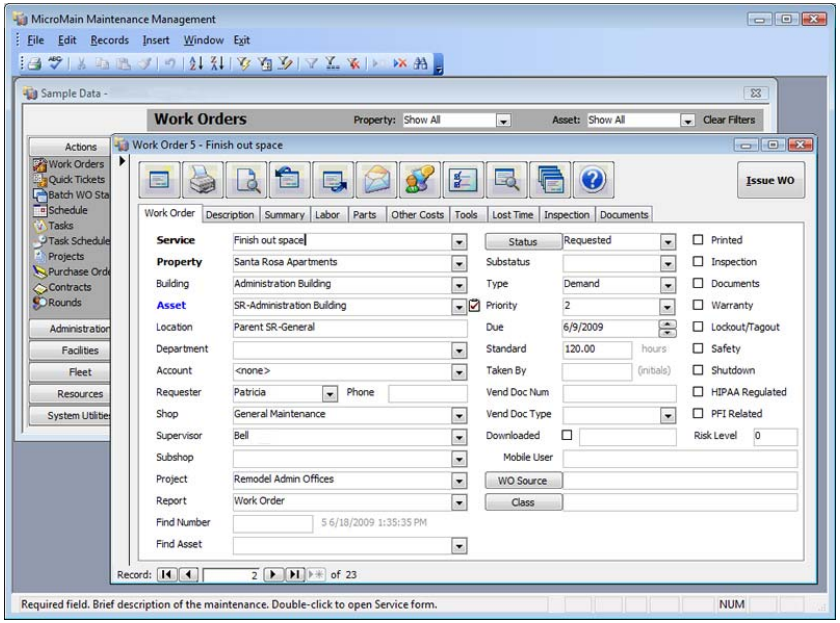
CMMS/CAFM

Successful Implementation

- Used throughout the organization
- Work & material management are integrated
- Performance indicators are used to gauge success and guide activities
- Maximize the life of the asset
- Overall maintenance costs have been reduced
- Maximum use of space
- Supporting information for staffing, projects & long range planning

Operations and Maintenance

Institutional Memory



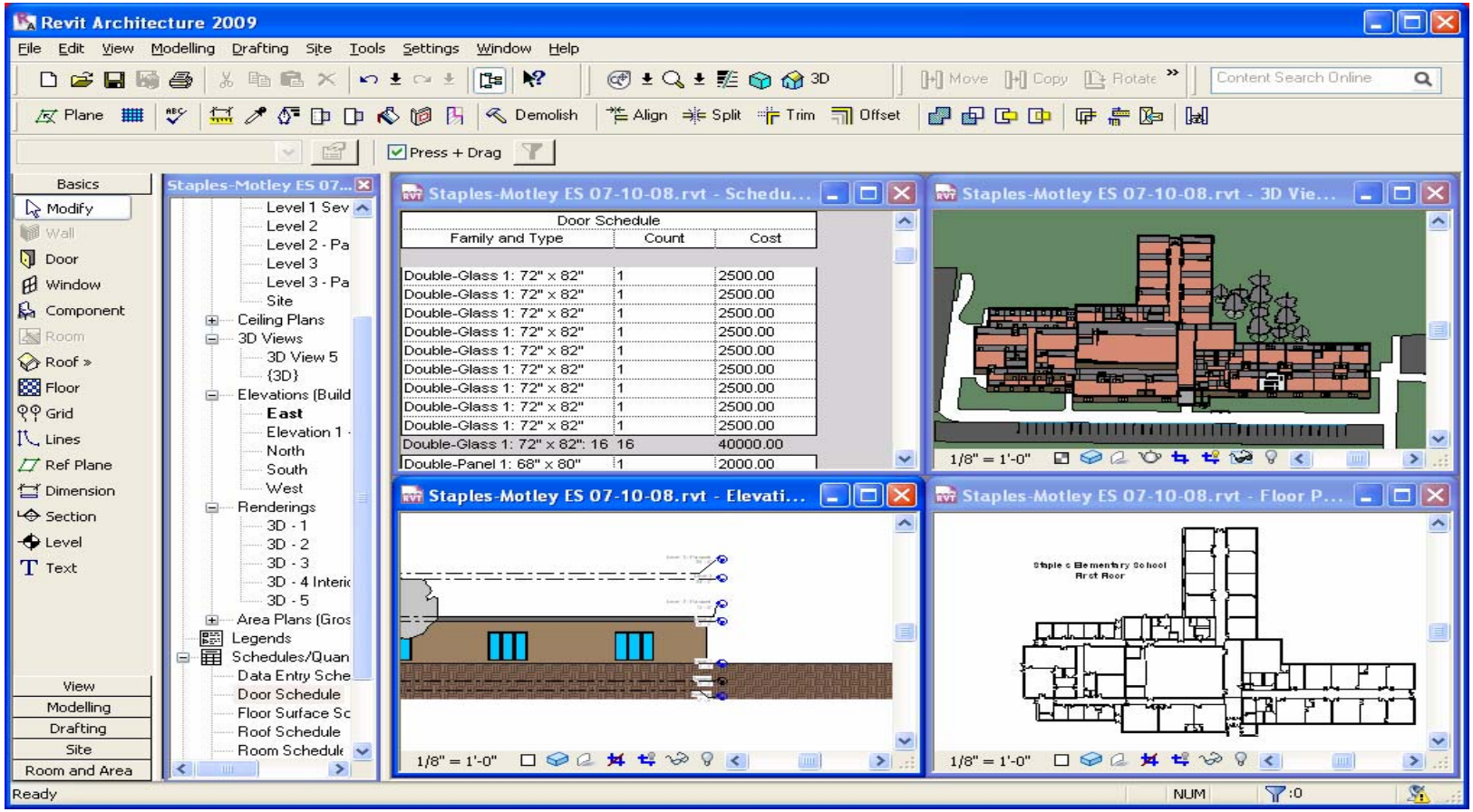
Capital Renewal Project Management

- Plan & manage all phases of projects
  - Develop scope
  - Identify project team and plan
  - Generate alternative strategies
  - Identify & secure needed resources
  - Coordinate and monitor project
  - Control change orders
  - Evaluate results of project
  - Project close out documents

- The difference between a project manager and a good project manager is how they handle the last 10% of the project.

What is Building Information Modeling?

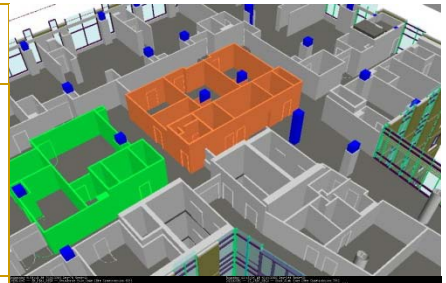
Linked, Automatic, Dynamic, 3D Data



How can BIM be used for planning?

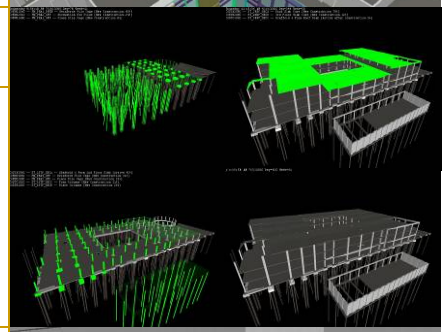
Design Visualization

Visualize building early in the process to support and accelerate the decision making process



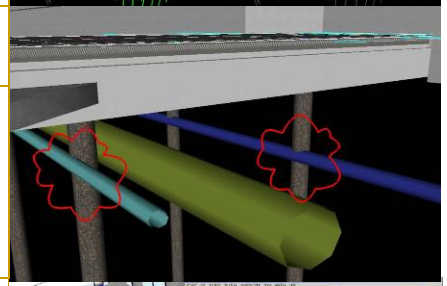
Schedule Visualization

Visualize construction process to review and optimize the construction sequence and the schedule



Design Validation

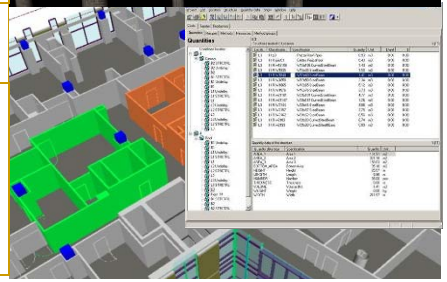
Integrate 3D models of all trades to identify interferences and constructability issues before they materialize in the field



Estimating

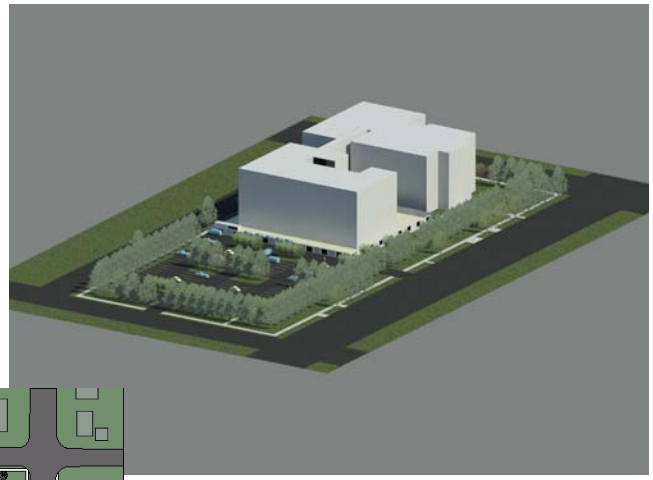
Tie scope of project to a price;

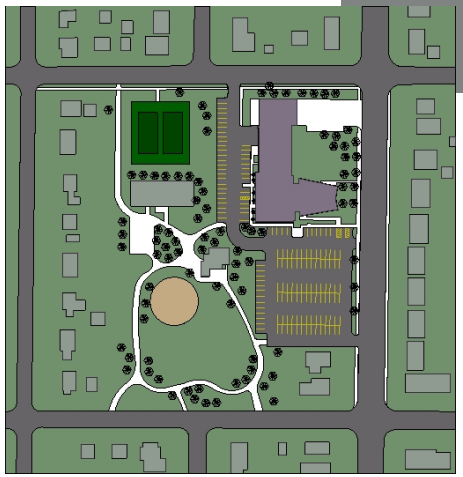
Manage scope changes more efficiently



How can BIM be used for project planning? (Cont'd)

- Data quality
  - Accurate (coordinated, consistent & computable)
  - long term information – Institutional memory
  - Utilizes legacy software
- Model can be shared with other firms (Architectural/Engineering)
- Cost Estimating
  - Accurate and error free



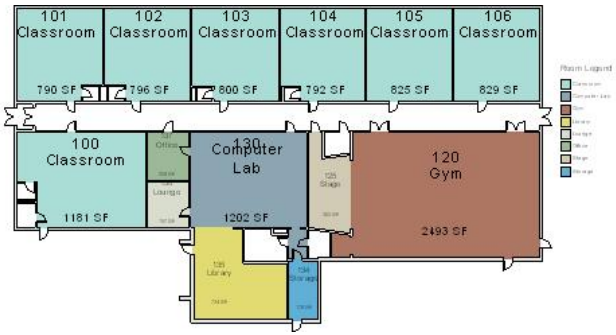


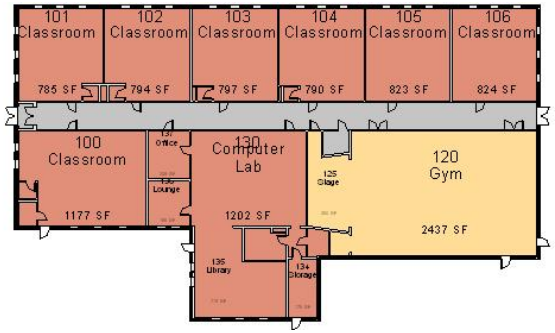
Long Range Plan Development

- Allows One to be Pro-Active; Not Reactive
- Encourages Efficiency and Value
- Encourages Involvement & Goal Setting
- Encourages Data Collection/Retention
- Is Politically Expedient/Leads to Funding
- Provides Communication Tool
- Exhibits Professionalism
- Provides Peace of Mind

Planning Tools – What to Look For

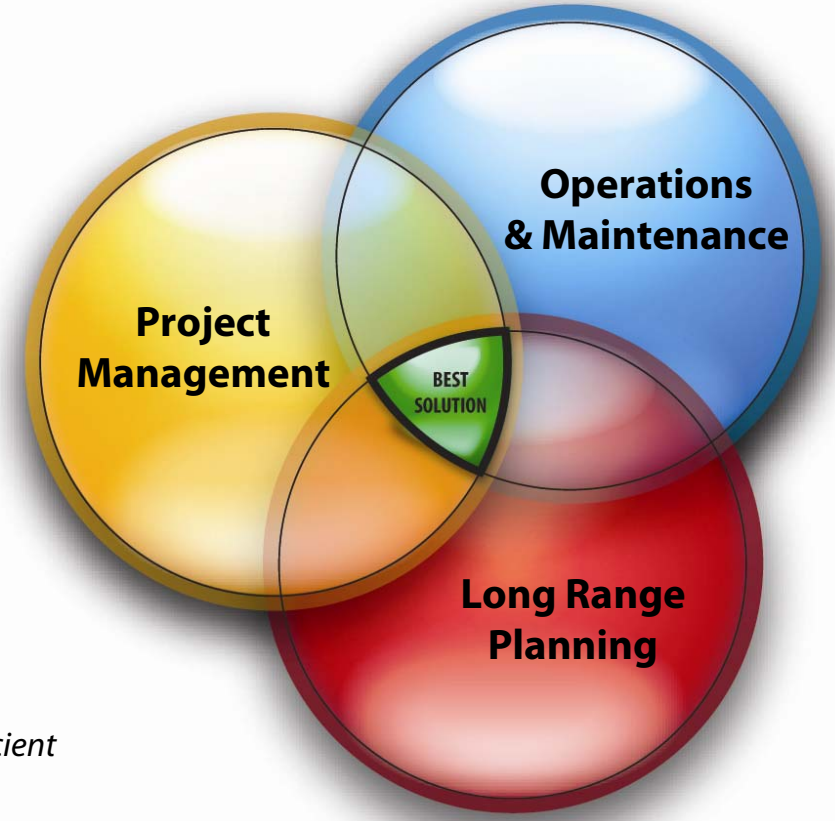
- Comprehensive
- Can Manage All Types of Data
- Web or Network Based – Accessible from several locations
- Visually Interesting
- Easy to Use
- Incorporates Benchmarking and Metrics
- Dynamic – Not Static





Building Information Management

Project Management
Accurate building drawings
BIM
Design/Project Visualization
Cost Estimating
Information Collaboration
Close out documents



Operations & Maintenance
CMMS/CAFM
Specific Asset Information
Work Order/Request
Supporting Information for Capital
Projects & Long Range Plan
Space Utilization
Institutional Memory
Establish Metrics & Benchmarks

Balanced Process:

- *Being Proactive & More Efficient*
- *Align Expectations Early*
- *Establish a Clear Path for Success*
- *Create the **Best Solution***
- *Creates **Best Opportunity for Success***

Long Range Planning
Budgeting for capital projects
Proactive
Establish Metrics & Benchmarks
Communication Tool
Life Cycle Analysis

Thank You!

Facility Planning & Management

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