

## 0 The Art of Information Management for Project Managers

### 0.1 Summary

With the ever-increasing speed and quantity of information project managers must process, mastering the art of information management is the key to a successful project. This seminar will examine modern tools and techniques for managing, tracking, analyzing and controlling project information more effectively and in less time.

### 0.2 Abstract

Architects are in the information business but few architectural firms have modern information management systems in place. Although using computers, most firms manage their projects using techniques transferred from the paper world and fail to take full advantage of technologies currently available. Architects must begin to think “data” not “documents.” They cannot manage projects effectively with what amount to electronic versions of folders and files. They must abandon the paper metaphor in favor of a more sophisticated and comprehensive approach to information management.

Spreadsheets and word processing documents are standard project management fare but do little to assist the project manager in actually tracking and analyzing the information. Tools built on easy-to-use database software can effectively tackle the problem but few firms know how to utilize the technology effectively.

This presentation is a blend of project management, information management and computer technology concepts. It will examine an architect-designed information management system built on cross-platform, multi-user, web-capable, relational, database management technology. The participants will receive real-world techniques and methodology on how to change their current way of thinking and construct their own information management system thereby making them more effective project managers.

### 0.3 Learning Objectives

Participants will understand how to overcome real and imagined obstacles to effective project information management.

Participants will learn various methods for filtering, classifying, storing and retrieving project information more quickly and effectively.

Participants will be able to use knowledge gained to implement a more comprehensive information management strategy in their practice.

# 1 Why is Information Management Important?

1.1 Project Managers are Information Architects

1.2 Information Management Tasks

- Create
- Analyze
- Synthesize
- Process
- Compose
- Communicate
- Store
- Retrieve
- Clarify

1.3 Information Management Practices

1.4 The Person with the Best Information Wins

# 2 Goals

2.1 Make the Technology Transparent

2.2 Stop Managing with Paper

2.3 Information Reuse and Retrieval

2.4 Digital Workflow

2.5 Tighten Feedback Loops

2.6 Build a Knowledge Base

2.7 Build an Information Age Practice

# 3 Understanding

3.1 Data

3.2 Information

3.3 Knowledge

3.4 Wisdom

- 4 Information Anxiety
  - 4.1 Paper-Bound Management
  - 4.2 Too Many Data Sources
  - 4.3 Too Much Data
  - 4.4 Too Many Tools
  - 4.5 Disorganized Process
  - 4.6 Information is Fragmented and Irretrievable
- 5 Digital Transition Stalled
  - 5.1 Most Firms Still in Transition
  - 5.2 Some Firms Can't Let Go of the Past
  - 5.3 Parallel Systems = Duplication of Effort
- 6 Dealing with Paper
  - 6.1 Avoid it When Possible
  - 6.2 Incentives for Digital Data
  - 6.3 High Speed Scanning
  - 6.4 Standardize on PDF
  - 6.5 Incoming Document Log
  - 6.6 Coordinate Paper and Electronic Filing Systems
- 7 Too Many Data Sources
  - 7.1 Analog
    - Snail Mail
    - Phone Calls
    - Meeting Notes
    - Phone Messages
    - Courier
    - Voice Mail

FAX  
FEDEX  
UPS

## 7.2 Digital

Email & Attachments  
Web  
Digital Files on Removable Media

## 8 Consolidate Incoming Streams

## 9 Email as a Project management Tool

### 9.1 Transaction Record

### 9.2 Threaded

### 9.3 Easily Disseminated

### 9.4 Searchable

### 9.5 Easily Organized?

## 10 Email Management Tips

### 10.1 Create Standards

Descriptive Subject Lines  
Project Numbers in Subject  
One Subject per Email

### 10.2 Automate Processing

Rules  
Archiving  
Links to Files on Disk  
Employ SPAM Filtering

### 10.3 Use as Task List

Flag for Follow-up

### 10.4 Consolidate FAX and Voice Mail

### 10.5 Other Uses

## 11 Project Life Cycle Information

11.1 Conception

11.2 Design

11.3 Specification

11.4 Scheduling & Estimating

11.5 Construction & Procurement

11.6 Property & Facilities Management

11.7 Renovation

11.8 Retrofit

11.9 Demolition

11.10 Recycling

## 12 Too Much Data

12.1 Bit Literacy: Let the Bits Go

12.2 Filter the Data

12.3 Categorize the Data

12.4 Organize the Data

12.5 Automate Processing

12.6 Don't Confuse Quantity with Quality

12.7 Consistency is the Key

## 13 LATCH

13.1 Location

13.2 Alphabetic

13.3 Time

13.4 Category

13.5 Hierarchy

## 14 Too Many Tools

14.1 CAD

14.2 Accounting

14.3 Information Management

Disconnected Collection of Tools

Word Processor

Spreadsheet

Project Scheduling

Email

Web Browser

## 15 Disorganized Process

15.1 Need Uniform Methodology

15.2 Uniform Organizational System

15.3 Coordinate Paper and Electronic Filing Systems

15.4 Maintain a Digital Workflow

## 16 Maintain a Digital Workflow

16.1 Use Paper as an End Product Only

16.2 Keep Workflow in Digital Form

16.3 Use Paper for Convenience Aside from Flow

16.4 Standardize on PDF

- 17 Timecard Example
- 18 Think Data not Documents
  - 18.1 Document Metaphor Does Not Work Well
  - 18.2 Words Pictures Numbers
  - 18.3 Don't Manage Information on Paper
  - 18.4 Create Highly Structured Reusable Information
  - 18.5 Move Away from Word Processors and Spreadsheets
  - 18.6 Deemphasize the Folder/Document Metaphor
- 19 Correspondence Management
  - 19.1 Documents as Records in a Database
  - 19.2 No File Naming, No Filing
  - 19.3 Output to Paper, Email, etc.
  - 19.4 Coordinate with Filing Codes
  - 19.5 One Place to Find All Documents
- 20 Information Management System
  - 20.1 Primary purpose is to Retrieve Information
  - 20.2 Goal is Info at Fingertips
  - 20.3 Create a More Tightly Integrated System
  - 20.4 Save Best Practices and Experience
  - 20.5 Ultimate Goal is Knowledge Management
- 21 Information Management System
  - 21.1 Pervasive
  - 21.2 Uniform Standards

21.3 Filing System/File Naming Conventions

21.4 Standardize on PDF

21.5 Dominated by Database Management System

## 22 Information Management System Comparison

<b>Conventional</b>	<b>RDMS</b>
Does Not Scale Well	Designed for Scalability
Multiple Applications Varied Interfaces	One Dominate Application Uniform Interface
Saving, File Names, File Folders (a big problem)	No Saving (automatic), No Files, No File Names, No Folders
Single Organizational Structure (ad hoc, difficult to enforce standards)	Multiple Organization Structures (LATCH)
Single User (sharing is not real-time)	Multi-user (sharing is real-time)
Security & Access Options Limited	Security & Access Options Very Robust
One Data View (usually WYSIWYG)	Many Data Views (including WYSIWYG )
Duplication of Data	No Duplication of Data
Limited Linking and Cross-Referencing	Robust Automatic Linking and Cross-Referencing (links are internal and not easily broken)
Difficult to Access Difficult to Navigate	Easy to Access Central Menu
Not Space Efficient	Space Efficient
Backup Not Built In	Backup Built In
Data is Poorly Structured Difficult to Move to Other Systems	Data is Highly Structured (“Atomic”) Easy to Move to Other Systems
Smaller Initial Investment?	Larger Initial Investment
Archiving?	

## 23 Information Management System Uses

23.1 Contact Management

23.2 Correspondence



- 23.3 Email
- 23.4 Project Database & Log
- 23.5 Calendar
- 23.6 Project Scheduling
- 23.7 Time & Expense Tracking
- 23.8 Fee Management
- 23.9 Billing
- 23.10 Resource Management
- 23.11 Drawing Management
- 23.12 Specifications
- 23.13 Cost Estimating
- 23.14 RFI Log
- 23.15 Submittal Log
- 23.16 Detail Library
- 23.17 Marketing
- 23.18 CRM Customer Relationship Management
- 24 RDBMS
  - 24.1 **R**elational
  - 24.2 **D**ata**B**ase
  - 24.3 **M**anagement
  - 24.4 **S**ystem
- 25 RDBMS
  - 25.1 Interface/Front End

- 25.2 RDMS
- 25.3 Operating System
- 26 RDBMS
  - 26.1 LAN
  - 26.2 WAN
  - 26.3 WWW
  - 26.4 Handheld Devices
  - 26.5 Phones
- 27 Database 101
  - 27.1 Spreadsheet  $\neq$  Relational Database
  - 27.2 Column  $\approx$  Field
  - 27.3 Row  $\approx$  Record
  - 27.4 Cell  $\approx$  Cell (field on a record)
  - 27.5 Table  $\approx$  Table
- 28 Database 101
  - 28.1 Project Database Example
  - 28.2 Project Directory Example
- 29 Knowledge Management Example
  - 29.1 Project Delivery System
- 30 Information Management System
  - 30.1 Roll Your Own
  - 30.2 Off The Shelf
  - 30.3 Custom

- 30.4 Consultant Assisted
- 31 Database Tools
  - 31.1 FileMaker
  - 31.2 Microsoft Access/SQL Server
  - 31.3 Oracle, Omnis, 4D, Informix, DB2
- 32 How to Get Started
  - 32.1 Use Email More Effectively
  - 32.2 Centralize Contact Data
  - 32.3 Centralize Project Data
  - 32.4 Use FileMaker Templates
- 33 Implementation Costs
  - 33.1 Base Cost per Module
  - 33.2 Cost per Seat
  - 33.3 Customization
  - 33.4 Installation
  - 33.5 Training & Startup
  - 33.6 Maintenance
- 34 Information Management Tools
  - 34.1 FileMaker & Templates
  - 34.2 Architectonica
  - 34.3 Portfolio
  - 34.4 Market Edge
  - 34.5 ProjectEdge

- 34.6 Primavera
- 34.7 Deltek Vision
- 35 Evaluating Software
  - 35.1 Real Power  $\neq$  Raw Power
  - 35.2 Real Power = Raw Power \* Ease of Use
  - 35.3 What is the tool's power to weight ratio?
- 36 FileMaker Advantages
  - 36.1 Relatively Easy to Learn
  - 36.2 Modular
  - 36.3 Relatively Low Initial Costs
  - 36.4 Peer to Peer Sharing or Client/Server
  - 36.5 Cross-Platform
  - 36.6 Free Templates
- 37 Summary

## Presenter

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## Books

Information Anxiety 2  
Richard Saul Wurman

## FAX & Voicemail Services

eFax  
[www.efax.com](http://www.efax.com)

MaxEmail  
[www.maxemail.com](http://www.maxemail.com)

OneBox  
[www.onebox.com](http://www.onebox.com)

WildFire  
[www.wildfire.com](http://www.wildfire.com)

## Information Management Systems

Architectonica  
[www.architectonica.com](http://www.architectonica.com)

Portfolio  
[www.arch-street.com](http://www.arch-street.com)

MarketEdge  
[www.mktedge.com](http://www.mktedge.com)

Integratis  
[www.integratisinc.com](http://www.integratisinc.com)

PDM-Architect  
[www.solutionmakers.com](http://www.solutionmakers.com)

Primavera  
[www.primavera.com](http://www.primavera.com)

Constructware  
[www.emergingsolutions.com](http://www.emergingsolutions.com)

FrontRunner Project Manager  
[www.frontrunner.com](http://www.frontrunner.com)

ProjectEdge  
[www.onlineproject.com](http://www.onlineproject.com)

Deltek Vision  
[www.deltek.com](http://www.deltek.com)

Ostara Office  
[www.ostara.com](http://www.ostara.com)

Autodesk Buzzsaw  
[www.buzzsaw.com](http://www.buzzsaw.com)