Technical Data Management Systems
Organize the data engineering professionals use every day

This presentation -

• Describes the scope of Technical Data Management (TDM)
• Differentiates TDM from Document Management (DM)
• Suggests which solution is appropriate for you
• Introduces Trix software and services

See also: First Steps in Engineering Document Management
Creating Engineering Document Control Procedures

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Defining Technical Data Management

• Technical Data Management (TDM) ensures people in engineering organizations enjoy fast, easy, access to reliable information, so they can do their jobs efficiently

• In practice it is a system made up of
  • Procedures, so data is handled consistently
  • Software for accessing the data
  • A Database for storing the data
Technical Data Management is increasingly important

• As information proliferates it gets harder to control and correlate
• Operations are no longer competitive if they just use manual approaches to managing information
• The digital file will no longer be the standard unit of storage. Just look at streaming music and videos to see the future for your drawings and documents
• Our systems must make it easy to find and disseminate engineering information, no matter if it is a day or a decade old.
Data Management streamlines everyday tasks

- Finding drawings or other documentation
- Progressing a change, review or approval
- Publishing a notification of change
- Communicating using markup
- Recording as-builts
- Providing vendor access to information
- Assembling documentation for a project
- Checking a change history
- Monitoring progress and flagging overdue items
To support these tasks Data Management provides

- Storage for files, metadata, histories, status flags, lists
- Procedures for data retrieval, workflow, communications
- Security regulating who can see what, who can do what
- Notifications and reminders
- Different solutions for different needs, because data, devices, roles and rules are not uniform
- Indicators of data quality and validity, because data that is incomplete or outdated may still be useful
Data being stored includes

- Drawings, Manuals, Videos, Photos, Code
- Metadata - Tags, Numbers, Categories, Notes, Cross Links
- Status Flags - For Review, Released for Build, As-Built, etc.
- Histories - Revisions, Check-out/in, Uploads, Approvals
- Lists - Equipment, Serial Numbers, Locations, Projects
Business Procedures include

- **Retrievals**
  - Finding and using Information

- **Workflows**
  - Design, Revision and Change Control
  - Approvals and Releases

- **Communications**
  - Markup (Redline)
  - Task Lists
  - Notifications

- **Security**
  - Controlling access and rights to see and change data
  - Data protection policies

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Users of data include

- **Technicians, Assemblers, Schedulers, Purchasing Agents**
  - Those who reference and markup drawings and documents
- **Data Controllers**
  - Responsible for overall data integrity
- **Project Managers**
  - Responsible for approvals, releases and workflow
- **Engineers, CAD Operators, Technical Writers**
  - Responsible for design, drafting and documentation
- **Customers, Vendors**
  - Need access to information and files to do their jobs
One size does not fit all

• What’s best for me isn’t necessarily best for you. Different approaches are needed to finding and using the same data.

• Devices differ. I have a low-power tablet with a small screen, you have a powerful PC with dual monitors, yet we both need to view the same data.

• Procedures vs. Expediency. Some users must follow strict rules, others are permitted discretion.

• Simplicity vs. Breadth of Information. Some users need minimalism, others need rich, deep, data.

• Security vs. Accessibility. Protection of data must be traded off against openness.

• Different data has different metadata requirements. E.g. Drawings record a scale, but scale makes no sense as a tag for a manual.
Quality vs. Validity

• A drawing that is not accurate may be valid for some uses
  – It is better than no drawing at all, provided it is labelled as incomplete
  – It is perfectly adequate for some uses. E.g. a diagram of evacuation routes does the job, even if some minor detail has changed

• A drawing that is completely accurate may not be valid for use
  – It may not be valid for use until all the drawings in the set are approved and the entire set is released to build

• Uncontrolled documentation has its place
  – Provided it is absolutely clear that is uncontrolled, it makes sense to be able to print off copies provided the risks of obsolescence are well understood
Data Management is not easy

- There are many different elements to manage
- There comes a point when humans cannot juggle all the information without introducing errors or delays
- TDM Systems take the load off individuals and provide reliable, consistent, information and disciplined procedures
- The result is improved operational efficiency because the organization has efficient access to data and improved trust and collaboration
Does your business need a TDM System?

- The more complex your business processes and the more staff, equipment and change you have, the more you should think in terms of Data Management, as opposed to just Document Management.

- A business with lots of meetings, white boards and projects is likely to need Data Management.

- For example, a chemical process plant will require a Data Management System but a real estate corporation can run fine with just a Document Management System.
## Differences between Data and Document Management Software

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<th>Data Management</th>
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What Trix can help you with:

- **Tools**: Our Trix range of TDM software is modern and affordable
- **Procedures**: Our consulting services can help you develop procedures that mesh with your existing business practices
- **Cleaning Up Data**: We mine, consolidate, clean and classify existing data so it’s ready for TDM
Trix Systems Software

• For Data Management
  – *Trix Organizer Industry Selections* provide Technical Data Management features specific to individual industries. Software is installed locally with Windows and Web clients
  – *Trix Project Access software* enables secure customer and vendor access to data during projects

• For Document Management
  – *Trix FastDoc* is a cloud-hosted Engineering Document Management service on a monthly subscription
  – *Trix Organizer Standard* is Engineering Document Management Software for local installation
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