

United States Postal Service Streamlines Mail Handling Processes and Evaluates Equipment using Microsoft Visio

Microsoft Visio Case Study

February 2003

Successful postal delivery services share the same goal as the United States Postal Service—universal service to all—no matter whether they provide service internationally, to an individual country, or within a single organization. A key component in meeting this goal and staying ahead of competitors is to constantly improve mail handling processes while keeping them cost-effective. The United States Postal Service has implemented the Enterprise Mail Flow Model (EMFM) solution—based on the Microsoft® Visio® diagramming platform and developed by Automation Associates—to do just that. It works with ICF Consulting to model and improve its mail handling processes and evaluate mail handling equipment using the EMFM solution and Microsoft Visio diagrams. On behalf of Microsoft Corporation, META Group Consulting recently conducted interviews with nine employees at the United States Postal Service, Automation Associates, and ICF Consulting to determine the diagramming needs of the United States Postal Service and how Microsoft Visio meets those needs. Interviewees report increases as high as 100% in effectiveness, 75% in efficiency, 80% in clarity, and 50% in accuracy as a result of using Microsoft Visio diagrams to streamline mail handling processes, evaluate mail handling equipment, and visualize software and database systems. Results like these will help the United States Postal Service not only meet the challenges of the 21st century, but flourish.

United States Postal Service needs to model and constantly improve their mail handling processes

The United States Postal Service delivers more mail to more people over a larger geographic area than any other federal postal service in the world. Although tremendous volumes of mail are processed and distributed daily, its diagramming needs are similar to mail handling facilities of any size.

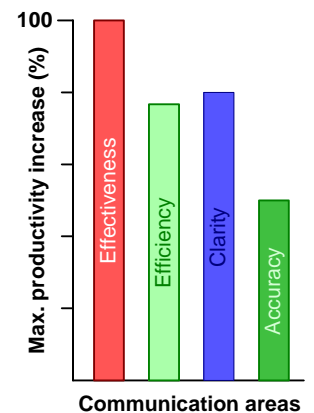
META Group Consulting recently conducted interviews with nine employees at the United States Postal Service, Automation Associates, and ICF Consulting to determine what the United States Postal Service needed in a diagramming tool, how Microsoft Visio fulfilled those needs, and how they used Microsoft Visio to simulate mail handling processes and facilities. The interview responses revealed the United States Postal Service needed a diagramming tool that would enable the organization to model and streamline mail handling processes and systems, while keeping them cost-effective, and evaluate equipment requirements. The responses also showed that previous tools were inappropriate for the task, or error-prone, cumbersome, and slow.



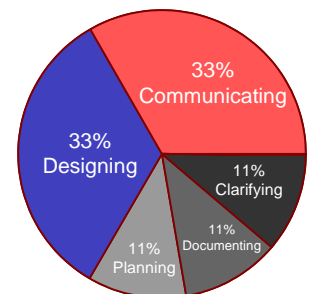
Interview findings

The following information applies to the employees interviewed at the United States Postal Service, Automation Associates, and ICF Consulting.

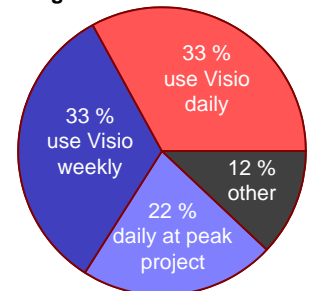
Maximum productivity increases



Most critical areas of value for Microsoft Visio

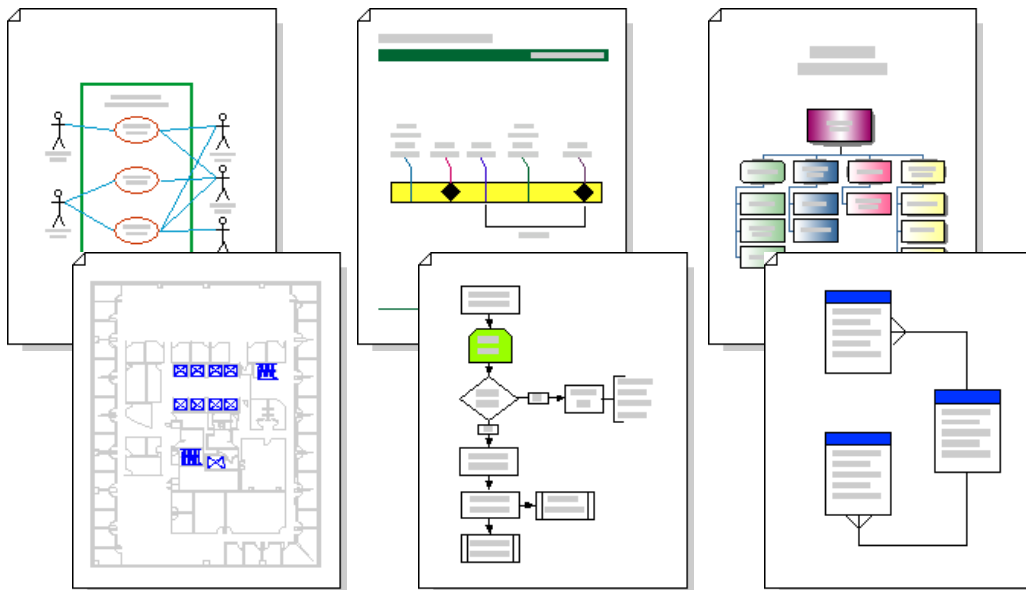


Frequency of Microsoft Visio usage



United States Postal Service uses Microsoft Visio diagrams to model processes and evaluate equipment

Automation Associates, a software company that has a long-standing business relationship with the United States Postal Service, developed the Enterprise Mail Flow Model (EMFM) solution based on the Microsoft Visio diagramming platform. This solution includes custom Microsoft Visio templates, stencils, and shapes designed specifically for modeling mail handling processes and diagramming mail handling facilities. Process and systems engineers at the United States Postal Service work with contractors at ICF Consulting in using these custom EMFM shapes along with other standard Microsoft Visio shapes to quickly construct mail flow models that show every step of the mail handling process—from mail arrival at a handling facility to sorting on through to carrier delivery. Employees also use Microsoft Visio and EMFM shapes to diagram mail processing facilities, visualize production line layouts, and model mail handling databases and software systems. Using process flow models, process engineers can avert potential bottlenecks in a process. Using software and database models, systems engineers can visualize system components and data interaction. And, using floor and space plans, process engineers or requirements specialists can graphically show facility layouts and the type of mail processing equipment the United States Postal Service needs to meet the mail flow requirements of a particular facility.



The United States Postal Service uses a variety of Microsoft Visio diagrams to visualize, examine, troubleshoot, and improve its mail handling processes, systems, databases, and facilities.

John Brown, a program manager for the United States Postal Service, uses Microsoft Visio to schedule projects with timelines and visualize his teams with organization charts. However, his main diagramming task involves using EMFM shapes to create process flow models that represent mail handling processes and the relationships between operations. When asked about the tools he used prior to using Microsoft Visio, John says, "It took a long time to simulate and develop accurate models. With Visio, we can now quickly develop initial simulations that are 80% accurate in much less time and without a lot of programming. Someone who knows Visio can learn EMFM easier than the old simulation environment." When asked how Microsoft Visio supports his efforts, John says, "It allows a system wide view of operations. We can look at systems, equipment, and processes." Using Microsoft Visio and the EMFM solution, John spends 40% less time doing simulations and arrives at answers more quickly.

Evaluating equipment requirements and how process changes affect mail processing facilities is also important at the United States Postal Service. Requirement specialists and process engineers use Microsoft Visio and the custom shapes in the EMFM solution to evaluate equipment from different vendors to determine whether the equipment meets processing requirements and is within budget parameters. Equipment utilization information is currently gathered at each facility and stored in a database. However, Automation Associates and the systems engineers at the United States Postal Service foresee using Microsoft Visio and the EMFM solution to obtain and automatically update utilization information in a database. This type of equipment diagram-to-database integration will enable employees to quickly solve processing problems and managers to maximize equipment utilization by redirecting mail to the most appropriate processing facility.

Scott Lear, a project manager for IFC Consulting, determines how much the United States Postal Service can pay for new mail handling equipment and assesses which pieces of equipment the United States Postal Service should use. He says, "Visio has definitely made my life easier. We are dealing with hundreds of thousands of data points. We can develop a baseline with Visio and bounce ideas off the model and test different changes to the process and equipment."

United States Postal Service communicates effectively and saves time by using Microsoft Visio diagrams

Linda Malone, a systems engineer for the United States Postal Service, diagrams mail flows from inception to delivery and what-if scenarios to see the effects of various process components on the entire mail handling process. When asked how Microsoft Visio supports her efforts, Linda says, "Visio enables the depiction of complex designs and flows in a single chart. Writing this out could take hours and have little meaning to viewers." When asked how many hours she saves using Microsoft Visio, she says, "It is hard to quantify because in some instances one good Visio chart could save untold work hours."

When Beth Kulick, Vice President of Automation Associates, and a daily user of Microsoft Visio was asked how many hours she saves using Microsoft Visio, she replied, "Days of work." When she was asked to specify how many hours she saved for specific diagram types, she reported saving 80 hours each month on floor plans and systems diagrams alone. This sort of ringing endorsement for Microsoft Visio was typical among those interviewed. Respondents save an average of 15 hours each month using many different diagram types; more specifically, 49 hours each month using floor plans and 48 hours each month using EMFM shapes in mail flow models.

When asked about how she accomplished tasks before and after using Microsoft Visio, Beth says, "We often represent physical systems. In order to model a physical system, there is a dimensional and geographical accuracy that needs to be maintained. Before Visio, this was a tedious process done manually with a ruler. It was error-prone and hard to change. With Visio we can import a dimensionally correct CAD layout and place the information we need from the CAD drawing in Visio to support our project. Then, we can automatically translate that information into a model. It is a huge timesavings."

Not only do interviewees save time, they also benefit by using Microsoft Visio diagrams as an effective communication tool. Beth reports sharing diagrams with thousands of customers. She says, "Visio helps effectively communicate complex business ideas and diagrams are more compelling. You don't have to be a simulation expert to use the EMFM solution. We give it to customers who want to use it without having to be a guru in making these models. It really brings the simulation world to a much wider group."

Additional Information

For the latest Microsoft Visio product information, visit www.microsoft.com/office/visio/.

Microsoft®

The interviews referenced in this document were conducted by META Group Consulting on behalf of Microsoft Corporation. The statements within this document report interview findings and offer insight into Microsoft Visio product usage; however, the qualitative statements are not made by META Group Consulting. These interview findings and statements do not represent a statistically valid sample and do not endorse Microsoft Corporation, its products, or services.

© 2003 Microsoft Corporation. All rights reserved. This document is for informational purposes only. MICROSOFT MAKES NO WARRANTIES, EXPRESS OR IMPLIED, IN THIS DOCUMENT. Microsoft and Visio are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. The names of actual companies and products mentioned herein may be the trademarks of their respective owners. [Part No.???](#)