

Panzura Survey Report

State of Manufacturing Cross-Site CAD Collaboration

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Background

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Summary

In today's fast-paced global economy, manufacturing firms increasingly need to make product changes quickly and introduce new designs before competitors can outflank them. To do this, they need fast, efficient CAD and file collaboration across sites – even when design and production teams are spread out around the world.

But global CAD and file collaboration isn't easy. When asked what challenges they had when trying to collaborate with colleagues across distributed sites, responses included:

- Over 32 percent of respondents reported poor performance when accessing files across the WAN
- 34 percent of respondents were unable to determine when a new file or version had been created
- 36 percent of respondents experienced multiple copies of the same file
- 22 percent of respondents were challenged with multiple standard libraries
- 33 percent described challenges of knowing where to find their files
- 17 percent listed maintenance of security and server access rights as an issue

These challenges can have a significant impact on the organization, with respondents reporting problems including:

- Nearly 57 percent of engineers had to wait too long for files to update
- 33 percent of product teams accidentally used incorrect or outdated parts
- 26 percent had to merge multiple versions or parts of design files
- 22 percent lost critical project and product data and were tasked with redoing their work

As expected, most respondents use SOLIDWORKS CAD for their design work, but 14 percent also use AutoCAD Inventor, and 9 percent use CATIA. This means that collaboration solutions must work across multiple applications – not be application specific.

Survey Objective

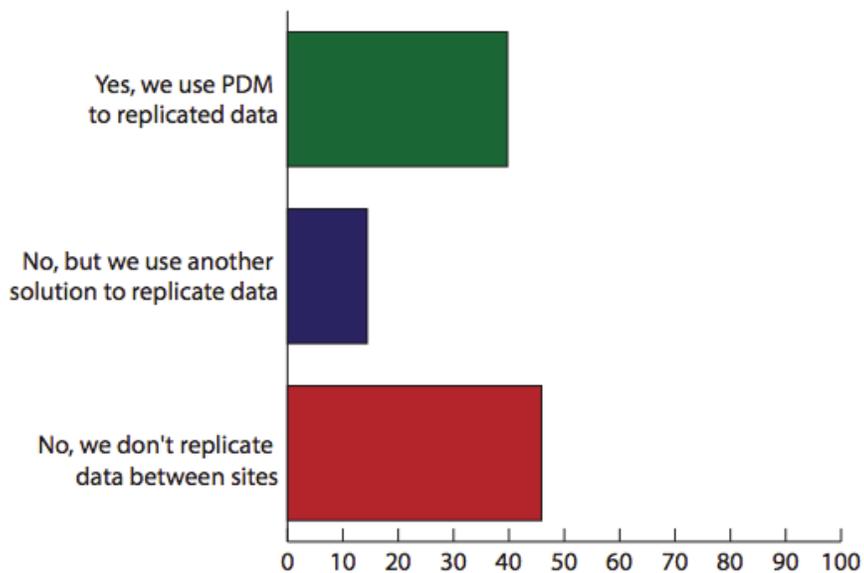
This survey was conducted to identify the issues that manufacturing organizations encounter when they try to collaborate across sites and how these issues impact their IT teams, design teams, and overall business.

Findings

Collaboration

The survey found that many manufacturing organizations are struggling to collaborate on CAD across their offices. Almost 46% said that they do not currently replicate or share data between offices. Small firms with under 100 employees collaborated the least, while firms with over 500 employees were more likely to share data.

Do you use PDM to replicate project data across multiple locations?



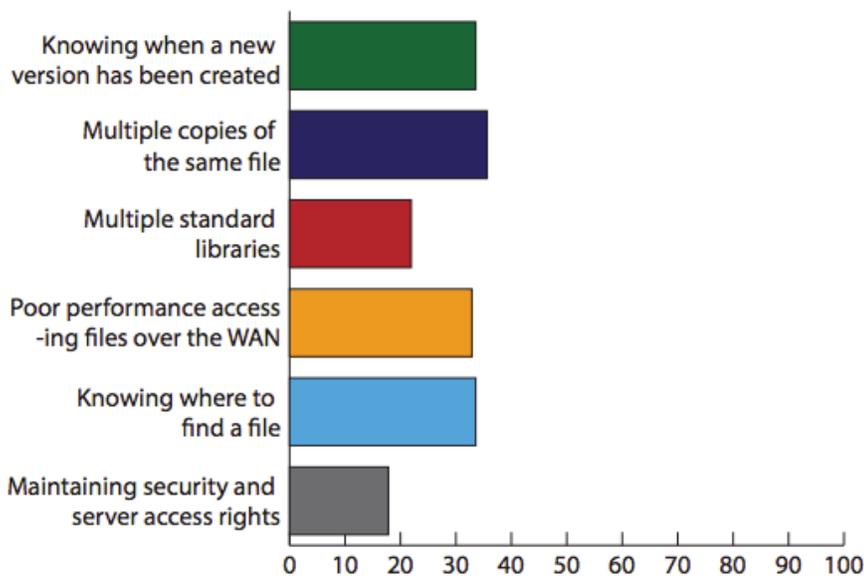
Answer Choices	Responses
Yes, we use PDM to replicate data	39.73%
No, but we use another solution to replicate data	14.38%
No, we don't replicate data between sites	45.89%

Almost 60 percent of the companies currently collaborating across sites responded that their top challenges included multiple issues, with 43 percent having at least three challenges. 36 percent of respondents said multiple copies or versions of the same file were a problem and 34 percent said knowing when a new file had been created or even knowing where to find a file was a challenge.

Application performance over the WAN ranked highly as well at 33 percent

Which of the following problems do you or your colleagues encounter most frequently when working across sites?

Select the top 3



Answer Choices	Responses
Knowing when a new version has been created	33.56%
Multiple copies of the same files	35.625
Multiple standard libraries	21.92
Poor performance accessing files over the WAN	32.88%
Knowing where to find a file	33.56%
Maintaining security and server access rights	17.81%

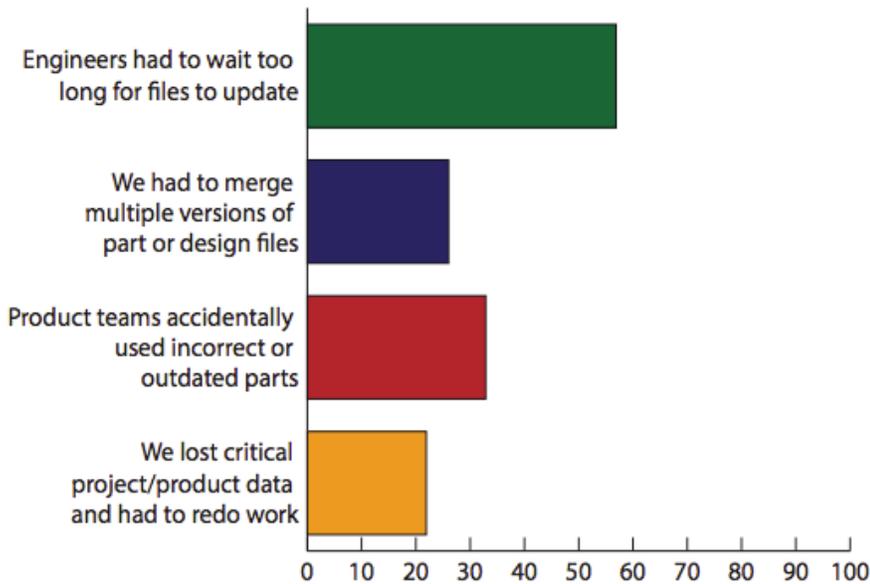
Nearly half of those with three or more issues use a PDM solution to collaborate across sites. Not surprising, manufacturing companies that do share data across sites tend to use PDM software to do the replication rather than another solution. Since product team workflows use PDM, companies prefer to keep file replication consistent with the workflow and use PDM to manage data and workflows. Users often work around PDM solutions if they see them as overly restrictive or slow, which only compounds the problems in the end. If a third-party replication solution doesn't work seamlessly with their PDM solution, they're less likely to adopt it.

Impact

The survey results show that these issues have a significant impact on manufacturing organizations. 57 percent said that engineers have to wait too long for files to update, slowing down product development and hurting productivity. Respondents also reported that product teams sometimes used incorrect or outdated part files.

What impact do the problems above have on your organization?

Select all that apply



Answer Choices	Responses
Engineers had to wait too long for files to update	33.56%
We had to merge multiple versions of part or design files	35.62%
Product teams accidentally used incorrect or our dated parts	21.92%
We lost critical project/product data and had to redo work	32.88%

These types of challenges can also harm employee morale and retention when key engineers feel like they don't have the tools they need to get the job done. Aside from waiting on files to update, engineers often have to manually merge multiple parts or versions of design files, which wastes their time and further impacts project completion deadlines.

Conclusion

The survey results demonstrate that many Manufacturing companies do not even attempt to collaborate across sites in design applications due to the perceived challenges, and those who do struggle significantly with cross-site collaboration.

Clearly, replication isn't sufficient. Companies need a single source of truth for files that is immediately consistent across sites, rather than scheduled replication in PDM that may only update files nightly. Furthermore, any solution should work seamlessly with PDM, so it's invisible to users – or even work without PDM for those who aren't ready to deploy PDM yet.

One of the best options available is a cloud-backed global file system with global file locking that keeps product files – even very large files like HD video – synchronized across sites. Manufacturers like Milwaukee Tool and National Instruments have adopted global file systems to accelerate engineering productivity and reduce IT infrastructure costs. To read more on the benefits of a cloud-backed global file system read this helpful guide.

About Panzura

Panzura optimizes enterprise data storage management and distribution in the cloud, making cloud storage simple and secure. Panzura's revolutionary global cloud storage solution combines the flexibility, performance and productivity benefits of distributed storage with the manageability, security and cost benefits of centralized storage, overcoming fundamental "administrator vs. user" and "budget vs. performance" conflicts. With Panzura, data location no longer affects usage. Panzura: Cloud Storage Made Seamless.



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