

Consultant migrates 80TB of data across 140K SharePoint sites



COWI successfully completed one of the biggest SharePoint-to-SharePoint migrations in the world with help from Metalogix® Content Matrix and Quest partner ProActive.

COWI

Country: **Denmark**

Employees: **6,700**

Industry: **Consulting**

Website: <https://www.cowi.com>

Perhaps no company has ever been as well-positioned as COWI to take on one of the largest SharePoint migrations in history. Founded in Denmark in 1930, COWI is an elite international consulting group specializing in engineering, economics and environmental science. The firm is involved in more than 14,000 projects every year; past successes include major bridges, highways, wind farms and rail transit systems.

COWI has relied heavily on SharePoint for years. Sites are the major vehicle for communication and collaboration with customers throughout projects, as well as for internal departments. Accordingly, the company's IT strategy lists SharePoint as the IT system that is most vulnerable to downtime.

About this case study

To reduce on-premise hosting costs, engineering consultancy COWI needed to migrate from SharePoint 2013 to SharePoint Online — including a staggering 80TB of data across 140,000 sites, many of which were actively being used for business-critical purposes.

Solution

With help from Metalogix® Content Matrix and Quest partner ProActive, COWI was able to complete one of the largest SharePoint-to-SharePoint migrations in the world in just 18 months — while maintaining both security and productivity with accurate migration of data and user rights. Plus, there was minimal downtime, which ensured high productivity even while employees got used to working from home during the pandemic.

Benefits

- Moved 80TB of data across 140,000 SharePoint sites
- Enabled direct migration from SharePoint 2013 to SharePoint Online
- Ensured business continuity with seamless migration of data, document versions and user rights

Solutions at a glance

- [Microsoft Platform Management](#)

Deliver a giant SharePoint migration — without business disruption? Challenge accepted.

In 2014, COWI upgraded from SharePoint 2007 to SharePoint 2013, moving 50,000 site collections in what was then one of the biggest SharePoint migrations anywhere to date. But within a few years, the company chose to move to SharePoint Online, primarily to reap the significant cost savings of eliminating the need to pay an external partner to host and manage its on-premises environment.

This migration dwarfed even COWI's previous project, involving a staggering 80TB of data across 140,000 departmental and project sites. And since many of the sites were actively being used for business-critical purposes, taking them offline for any significant period of time was simply not an option. In addition, COWI is committed to a strong digital employee experience (DEX) in all its projects, and this focus applied to the SharePoint migration as well.

Still, COWI was up for the challenge. "Our employees have high expectations from us; they don't want to be interrupted and they expect everything to be top-notch," explains Nina Sonne Nikolaisen, associate project director and quality manager at COWI. "So, we needed to create a good transition experience for all our users. It wasn't possible to take active sites offline for a week to migrate them because our users are consultants who need to work on their projects; if we interrupt them, the company loses money."

The key to success: Choosing the right partner and the right migration tool.

For its earlier migration to SharePoint 2013, COWI had engaged the leading Microsoft partner in Denmark, ProActive (now part of Fellowmind). Using Metalogix® Content Matrix from Quest, which they deemed "definitely the best product" for the project, ProActive delivered an exceptionally successful migration. Nevertheless, COWI was careful to perform due diligence as it began planning its migration to SharePoint Online.

"We explained our requirements to Microsoft and asked what tool they thought we should use," recalls Sonne Nikolaisen. "They said, 'We think you should

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Nina Sonne Nikolaisen

*Associate Project Director and Quality Manager
COWI*

go with Metalogix Content Matrix from Quest — it's top shelf.' So then we asked Quest for their top five partners with a presence in Europe, and we evaluated all five. Both of the top two contenders agreed that Content Matrix was the best tool for what we wanted to achieve. In the end, we chose ProActive, not just because of our previous success with them, but because they offered an automated migration strategy as well as the most innovative solution for our new intranet and project site portals."

The industry's most powerful SharePoint and Office 365 migration solution

Metalogix® Content Matrix is the industry's most powerful SharePoint and Office 365 migration solution. It enables migration from legacy SharePoint versions to SharePoint Online in one hop — including metadata, customizations, workflows, permissions, information architecture, Nintex forms and workflows, and Record Center sites — all without disrupting users or the business.

Products and Services

Software

- Metalogix® Content Matrix

Moreover, Content Matrix delivers the scalability required for even large migrations like COWI's by automatically distributing workloads across any number of machines and running multiple migrations simultaneously. In addition, it simplifies project management by providing visibility across all migration jobs from a single console. It even helps you reorganize and restructure content before and after the migration to drive user productivity and adoption of the target platform.

Preserving access rights to confidential data

Because the SharePoint Online migration project was so large, COWI and ProActive decided to divide it into phases, migrating groups of sites based on their size, purpose and level of activity. The first phase involved about 2,000 departmental and community sites. Although these sites involved significantly less data than those devoted to COWI's consulting projects, getting the migration right was no less vital.

"Each department had a SharePoint site, and the Quest solution enabled us to keep all versions of each document," notes Sonne Nikolaisen. "In addition, Content Matrix enabled us to be very precise about user rights during the migration. That was essential because some of the documents were confidential; it would have been a disaster if they could have been opened by unauthorized people."

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Migrating huge project sites without hurting business productivity

Next, the migration team turned to the 140,000 project sites. COWI creates a SharePoint site for each of its consulting projects to facilitate communication and collaboration both internally and with customers, partners and other project participants. During one period, the firm was creating 100 new sites every day.

These sites often grew very large. In addition to the SharePoint data, many sites had a file share to store content like CAT systems. Plus, COWI had two million public folders for storing email related to its various projects. Accordingly, each source SharePoint site was migrated into a SharePoint Online site attached to one or more teams in Microsoft Teams, where interaction with external parties takes place.

"Using Content Matrix, we migrated about 80TB of data across 140,000 sites — without impacting the business," says Sonne Nikolaisen. "The whole process took one and a half years, but the project sites went live over just four months. The most active sites went live over weekends, whereas sites with little activity could be handled during weekdays. The inactive sites could be moved whenever we chose, and we did those last."

To manage this complex project, the team developed a migration framework. "Since we could have a site down for only 24 hours, which was not enough time to perform a complete migration, we did incremental migrations," explains Sonne Nikolaisen. "We performed bulk migrations of the data in the background over time, keeping the source site available for users. Then we made it read-only, performed a final delta migration and completed multiple quality checks to ensure that everything is correct. Finally, we directed users to the new SharePoint Online site to work. Throughout the project, we made sure to maintain regular and effective communication with the users being impacted."

Content Matrix delivered the scalability required to migrate all the data quickly and efficiently. “One of the key benefits of Content Matrix is its easy scalability — we were able to migrate as much as a terabyte of data per day, says Henrik Nordtorp, senior solution architect at ProActive. “In a SharePoint Online migration, you move data using the Microsoft API. You have to avoid overloading the pipeline, but you also need to get your data into the queues from which it is moved to your sites. With Content Matrix, we were able to scale up to 70 migrations running concurrently, which was exactly right to maximize migration speed.”.

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Minimizing manual work and user issues while maximizing ROI

With Content Matrix, the vast majority of the migration project was automated — less than a tenth of a percent of the sites needed special handling. “Out of the 140,000 sites we moved, I estimate that we manually handled less than 100 sites in total,” says Nordtorp. “For example, one source site contained a folder with a name that is reserved in the Microsoft world; I’m not sure how someone was able to create it in the first place, but we had to rename it in order to get it migrated.”

At the same time, COWI’s demanding users were happy with the migration, since they were able to continue working, even in the most highly active sites. “The Monday after the first batch of SharePoint

Online sites went live, the team turned to each other and said, ‘Well, why is nobody complaining?’ But the truth was, the users simply didn’t notice much difference,” notes Sonne Nikolaisen. “And that’s actually a successful migration. Now they are reaping all the benefits of Microsoft 365, including Teams and Yammer.”

Senior management had reason to celebrate as well. Although they initially had reservations about the migration because of the risk of business disruption, the SharePoint Online migration proved to be a resounding success. “As intended, the migration enabled COWI to eliminate its on-premises hosting expenses,” Nordtorp says.

The solution — and vendor — of choice

Nordtorp identifies multiple features he finds valuable in the Quest solution. “Content Matrix offers multiple additional benefits,” he says. “The direct content database migration is huge, since it enables us to move the database into Azure and migrate from there, which is much faster. It also has a scripting back end, so we can use PowerShell to streamline projects. Another important thing is the transformers, which enable us to do special manipulations of the data floating from source to the target; that’s a unique tool that nobody else has.”

Indeed, Metalogix Content Matrix is the only tool ProActive will use for certain projects. “We are constantly evaluating the tools available to help us deliver our services,” Nordtorp reports. “When it comes to migrating from on-prem SharePoint to SharePoint Online, our migration team will only use Content Matrix — other solutions simply don’t meet our requirements. For example, ShareGate does not support migration if the source site is read-only, which means users can continue to change content while you’re migrating; plus, to get the log you need to troubleshoot an issue, you need to go back to the server where you actually did the migration from. Content Matrix is far more mature.”

“Plus, the support team is always professional and responsive,” adds Nordtorp. “Unlike other vendors who often shrug and say ‘that’s just how the product is,’ Quest actually takes action on the issues we report and provides the feature updates or hotfixes we need.”

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About Quest Software

Quest Software creates technology and solutions that build the foundation for enterprise AI. Focused on data management and governance, cybersecurity and platform modernization, Quest helps organizations address their most pressing challenges and make the promise of AI a reality. Around the globe, more than 45,000 companies including over 90% of the Fortune 500 count on Quest Software. For more information, visit www.quest.com or follow Quest Software on [X](#) (formerly Twitter) and [LinkedIn](#).