Rimo3

Outokumpu Modernizes Its Application Environment With the Help of Rimo3

Finnish Company Outokumpu

is the global leader in producing sustainable stainless steel and it is seen as an innovator across all aspects of its business. The company, which maintains operations in over 30 countries around the world, maintains an unwavering focus on modernizing its business—and this includes its IT operations.

Challenges

- Modernize application infrastructure by moving it to the cloud

- Migrate nearly 1,500 applications to Azure Virtual Desktop

- Automate manual testing process to accelerate migration

- Eliminate incidents arising from security patching without testing

- Institute smoke testing to eliminate application downtime due to incompatibilities with upgrades

Company Overview

Headquarters: Helsinki, Finland
Employees: Approximately 9,000
Operations: 30+ Countries Globally
**Carbon Footprint:** 70% Lower Than Global Industry Average
Website: www.outokumpu.com

Legacy Configuration

- 13 Legacy Citrix VDI Farms

- Hosted On Premises by 2 IT Infrastructure Providers

- 90% of Applications Are Homegrown (developed by AMS partner)

Outcomes

- 97% faster migration from Microsoft SCCM to Intune—8 days vs. 4 months

- Saved €120,000 in software licensing annually by migrating from SCCM to Intune

- Avoided €331,000 in labor costs to manually test and migrate 414 SCCM applications to Intune

- Eliminated application downtime resulting from Windows patches breaking applications 30 to 40 times per month

- Improved development and deployment time through packaging standardization

New Technology Configuration

- Citrix Desktop-as-a-Service (DaaS)

- Microsoft Azure Virtual Desktop

- Rimo3 Platform
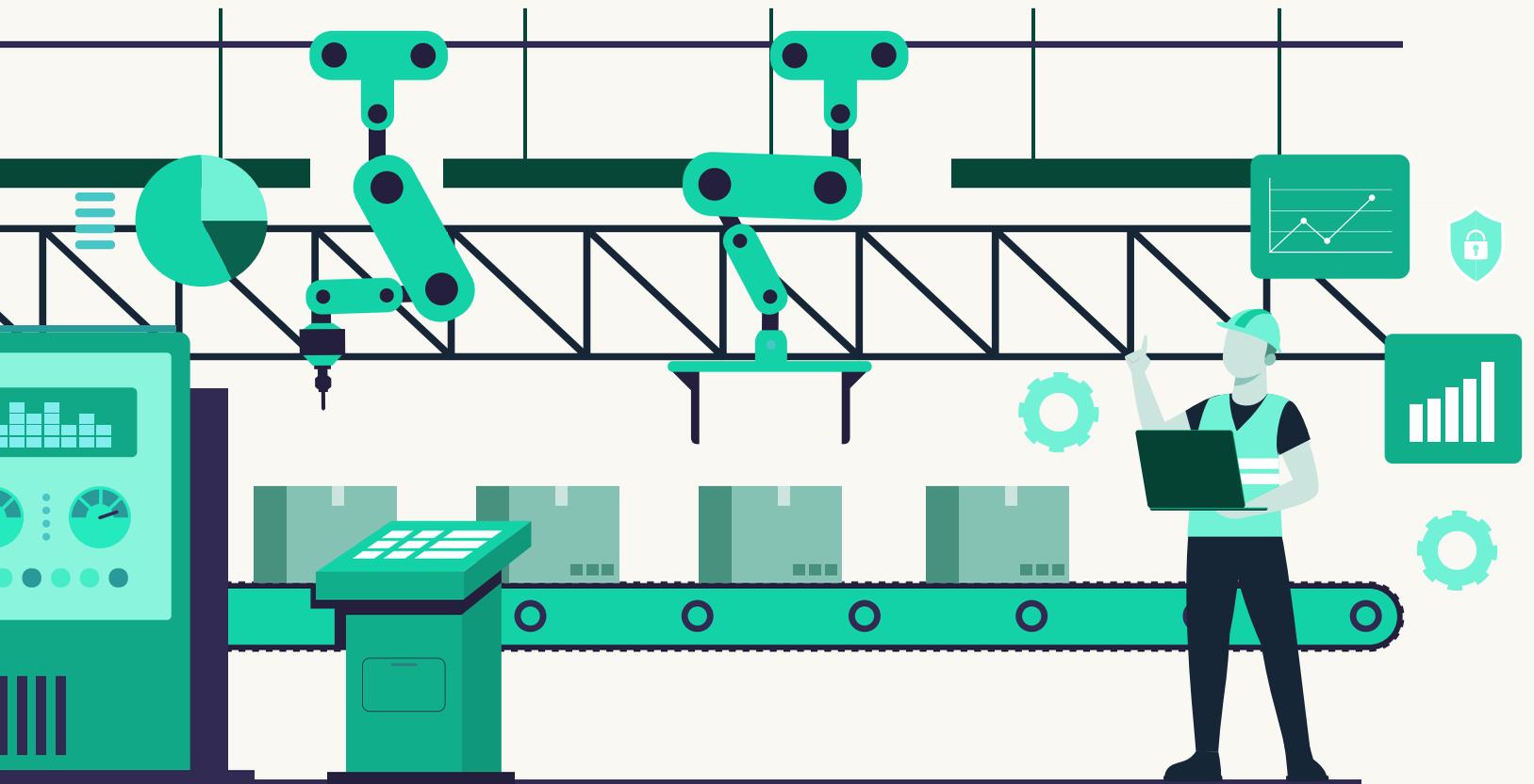
## Modernizing by Moving VDI to the Azure Cloud: Project Optimus

As part of its push to modernize operations, the manufacturer identified its application infrastructure as a prime target—designated Project Optimus. To lead the effort, Outokumpu recruited and hired Jani Anttila, a Helsinki-based expert in Citrix Desktop-as-a-Service (DaaS) and Microsoft Azure Virtual Desktop (AVD) cloud deployments. With that as a backdrop, one of the first decisions Anttila and Outokumpu made was to migrate its Citrix Virtual Desktop Infrastructure (VDI) to the cloud running on AVD and Citrix DaaS.

"At the time, we were married to our technology vendors that were hosting all of our servers and we didn't have access on the hypervisor level," recalls Anttila, who serves as the Services Manager at Outokumpu and is responsible for the company's Citrix Azure VDI Active Directory and Azure Active Directory. "Whenever we needed to deploy a new server or application, I had to create a service desk ticket and it would take a week or two before it was fulfilled. With Azure in place, I no longer need to submit tickets as I am the owner of my own subscription and responsible for our server and application deployments."

13 Legacy Citrix Farms Scattered Around the World

Once the company had Azure in place, time for the real work began. But migrating Outokumpu's legacy application infrastructure to the Azure cloud would not be an easy undertaking. "The company has 13 legacy Citrix farms that were up to 20 years old," Anttila describes. "They are running on MetaFrame XP and we had the whole 'rainbow' of Citrix systems in place." But this was just the cusp of the challenge. "The applications were not documented in the CMDB. Over the past 20 years, as people had changed, applications had changed, and suppliers had changed, we lost knowledge about our different applications."

The breadth of Outokumpu's application infrastructure exacerbated the situation and made the migration even more difficult. "We have 1,328 applications running on top of Citrix VDI, and most of them are homegrown," Anttila relates. "We also have another 150 or so applications on the workstation side with packages like BIOS upgrades, driver packages, and the like."
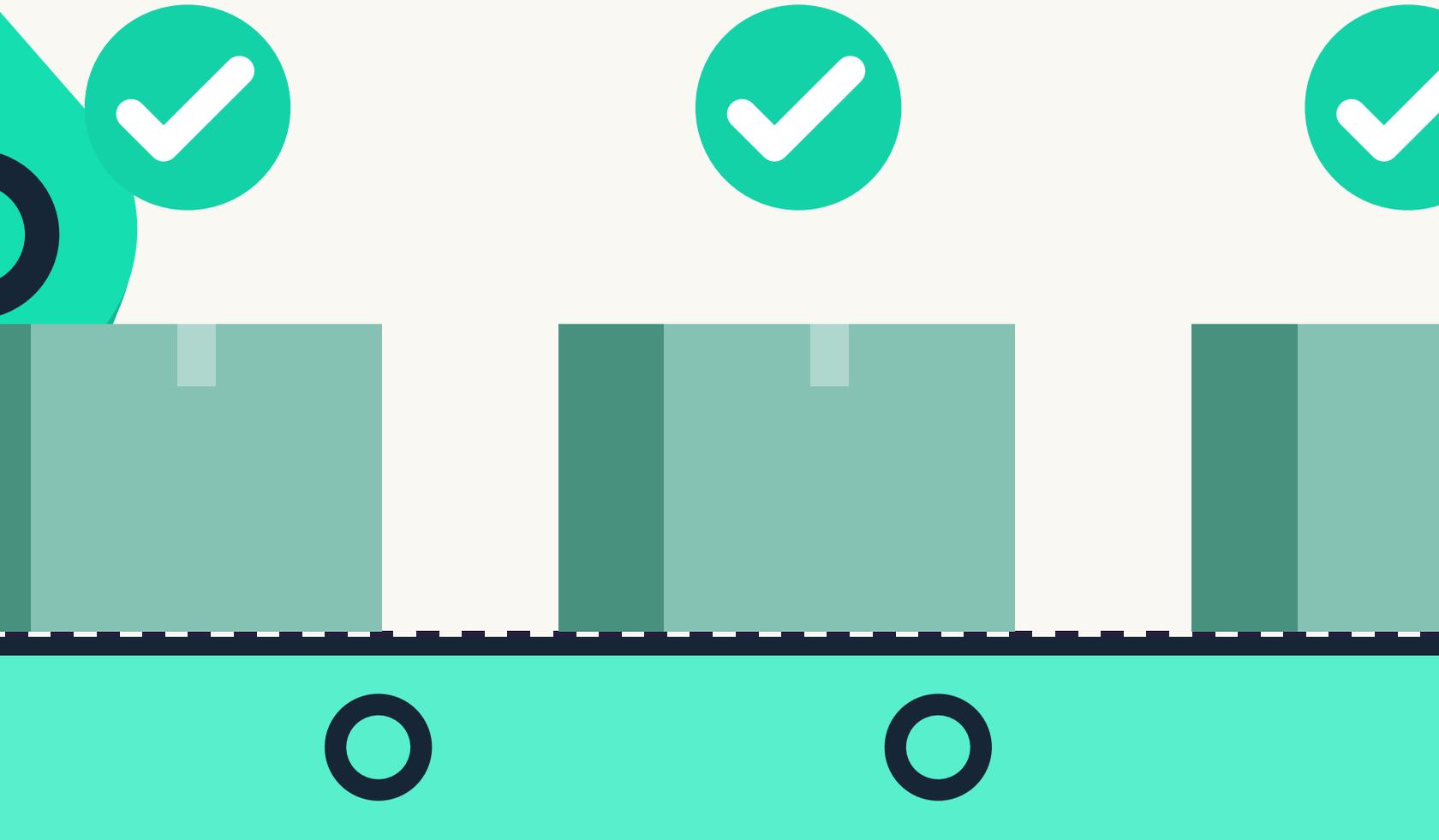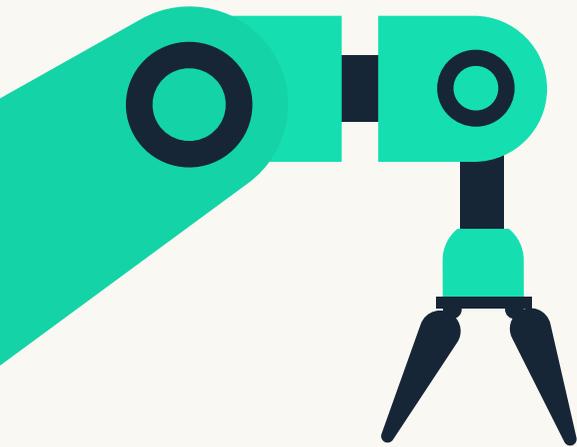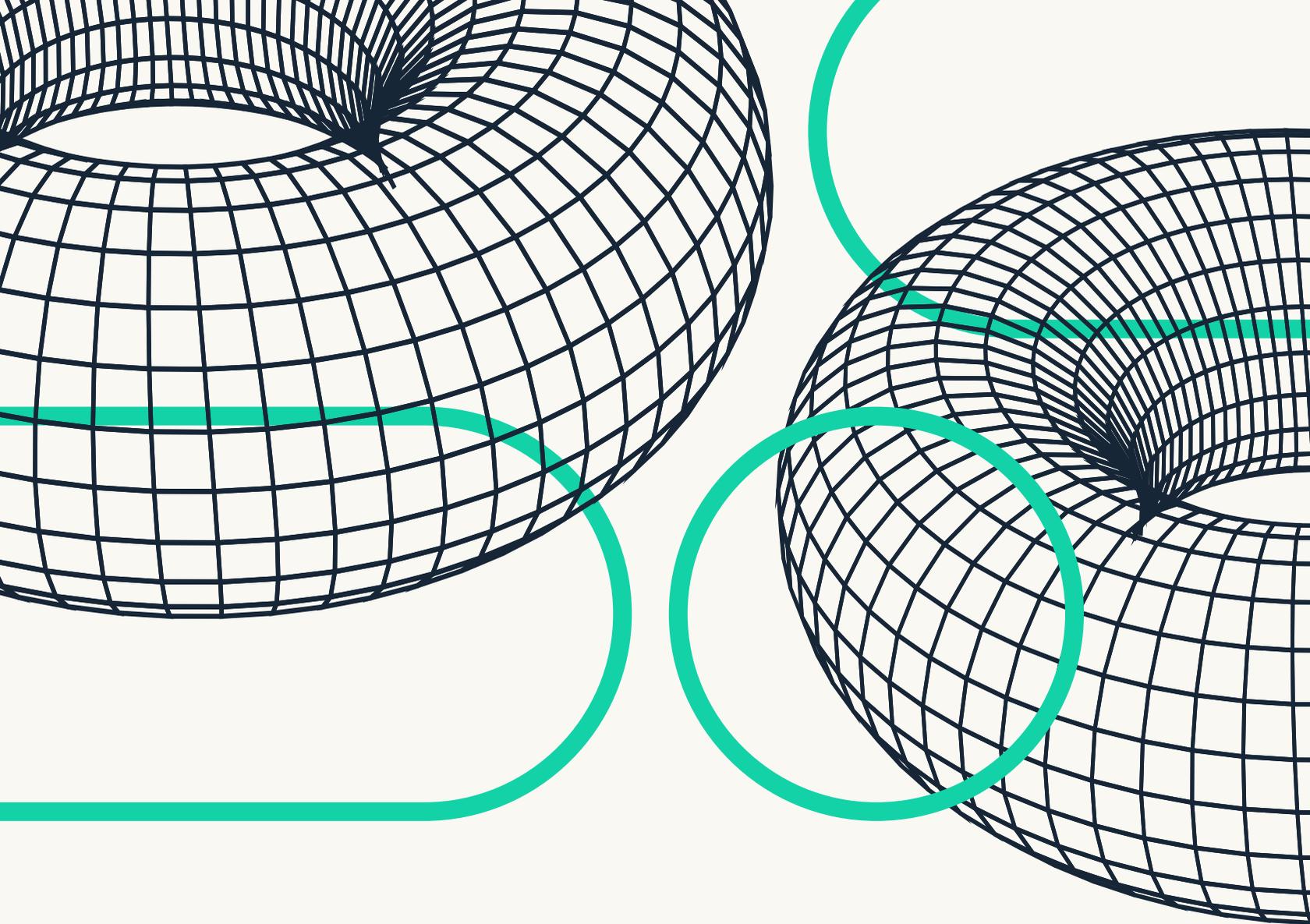
Breaking Cloud Migration Paths Due to Windows Patch Releases

The large number of applications and incidents involving Microsoft Windows releases proved to be a daunting obstacle. "It's absolutely impossible to keep up with the Microsoft release cycle if you want to test your applications," Anttila explains. "This creates a large number of incidents where something breaks due to a Microsoft release—time that we and our application provider, our AMS partner, must spend remediating the issue to bring it back online. Even more importantly,

"When an application is down, this directly impacts end users and our operations. Downtime for one application can cost €200 per minute. That's €288,000 per day for just one application. Multiply that by 1,500, and the loss in productivity and revenue is enormous."

## Daunting Challenge: 1,500 Applications to Migrate

About a year ago, to kick off the migration process to the Azure cloud, Anttila selected three Microsoft applications from the companies nearly 1,500 applications to migrate. To successfully test and migrate the applications to the latest Microsoft release, the quality of the application packages must have high fidelity. However, in the case of the three applications Anttila selected, the data quality simply wasn't there. "Our migration required high-quality data and incurred significant remediation of the application packages by our AMS partner and our team," Anttila comments. "Putting aside the fact that manual testing for 1,500 applications was infeasible, we would have encountered a large number of incidents migrating the applications."

In response, Outokumpu created a process where application owners were asked to complete a form to document the software into the CMDB in order to initiate the migration process for that particular application. "But it was really difficult to get them to start following the process; since core infrastructure is often a low priority outside of IT." Anttila says.

"They simply care about using the software. As a result, the migration issues became an IT problem rather than a business problem."

In the meantime, Anttila, seeking to deliver desktop application services to at least some of their end users, created a new remote desktop service on a Citrix DaaS instance in the cloud - as well as an Azure Virtual Desktop (AVD) deployment in the cloud. "These two were steps on our journey to the cloud," Anttila says. "We quickly onboarded hundreds of users onto AVD. This gave our users experience with a cloud-based VDI and the response has been very positive. But despite these two wins, we still had 13 legacy Citrix farms sitting out there that had not been migrated." This gap is what led him to Rimo3.
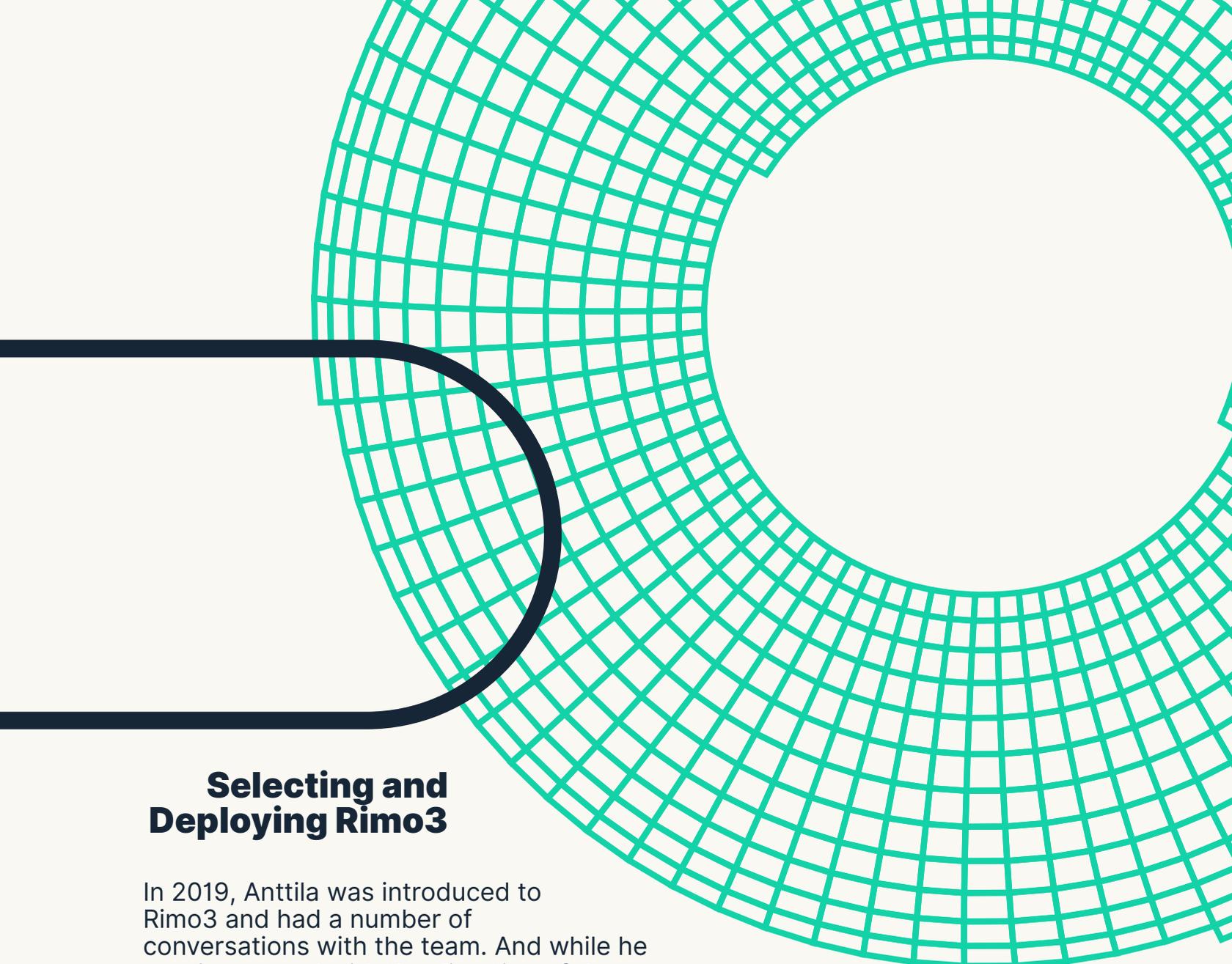
Selecting and Deploying Rimo3

In 2019, Anttila was introduced to
Rimo3 and had a number of
conversations with the team. And while he
was impressed with the direction of the
technology, he didn't have an opportunity to use it at
the time. This changed when Anttila ran into the aforementioned roadblocks.
The need for a different approach was accentuated by the failure of the three
applications he and the Outokumpu team targeted. "I reengaged with Rimo3
and was immensely impressed with the progress the company had made in just
a couple years," he notes.

Anttila, as a result, elected to engage Rimo3 to facilitate the migration process
last year. "Deploying Rimo3 was super easy and fast," Anttila reports. "It literally
took us a day or two to get it live. Being able to acquire Rimo3 in the Azure
Marketplace also makes the process a simple lift."
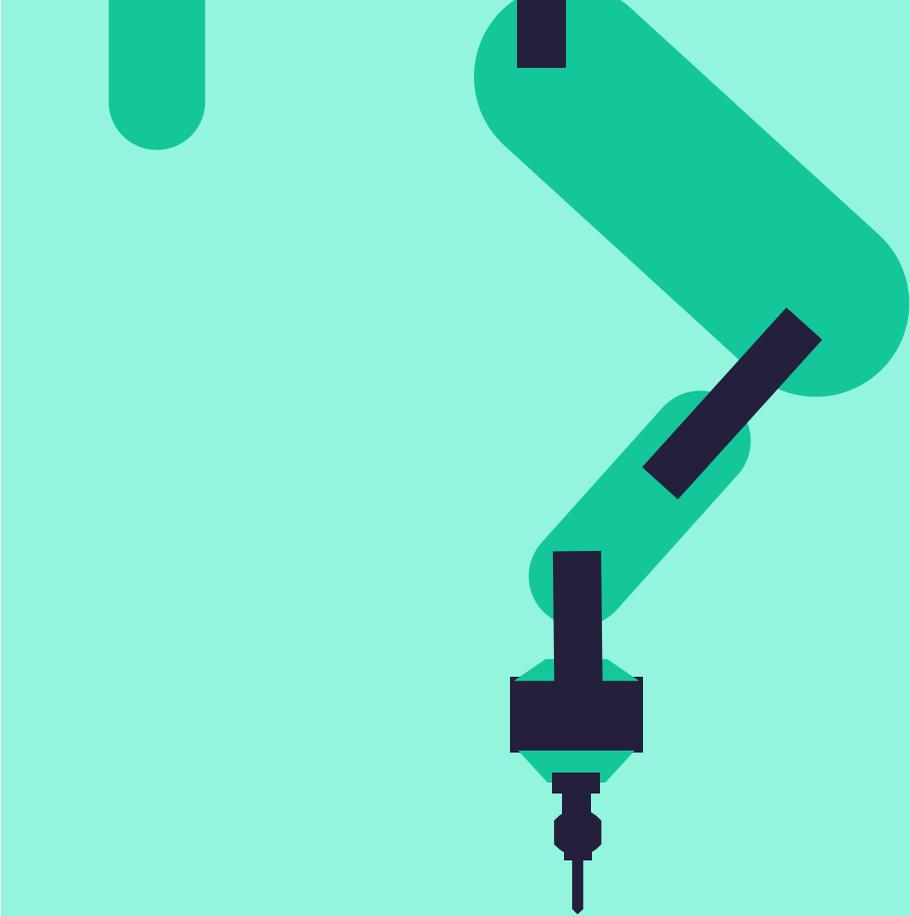
Smoke Testing Eliminated Incidents and Downtime from Windows Patching

Without Rimo3, Outokumpu deployed security patches as soon as they were released. "Previously, we just deployed them without any smoke testing," Anttila says. "But this broke applications that weren't configured to support the updates. We probably had 30 to 40 incidents per month."

Though the amount of time required to remediate the issue varied from one to the next, this resulted in downtime for users and time on the part of Outokumpu and their AMS partner teams to remediate. "Rimo3 enables us to test against these updates for all of the applications impacted before going live, which enables us to pinpoint the ones where remediation is required," Anttila says. "This allows us to identify if a patch will break an application and address the issue beforehand."

On a related note, one aspect of Rimo3 that Anttila believes is a real differentiator is the ability to tie application incidents back to a chain. "Our ITSM team actually started tracking the cause of incidents in their ITSM, which enables us to gain an understanding of why we're having incidents and to institute changes to mitigate those in the future," he says. "Now, we can go back to our AMS partner and show them the incidents caused by a Windows patch in their application code. In the past, they felt it wasn't necessary to test their application deliverables, but that isn't the case any longer."
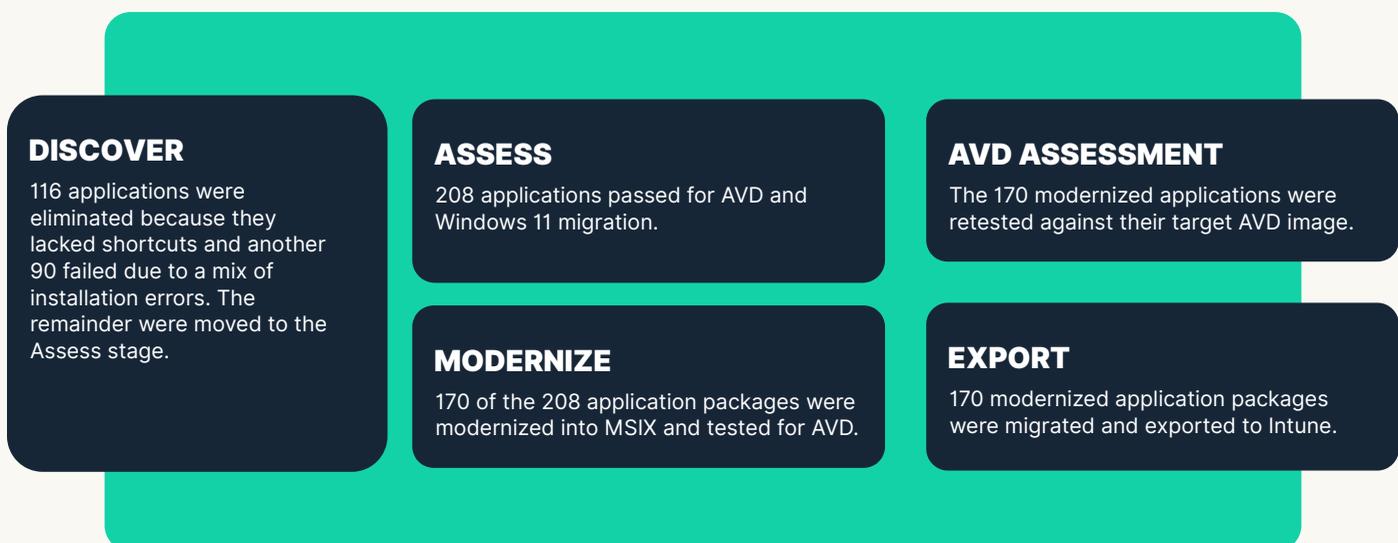
Migrating from SCCM to Intune in 8 Days vs. 4 Months

In addition to decommissioning its Citrix VDI infrastructure, Outokumpu also wanted to migrate its Microsoft System Center Configuration Manager (SCCM), which was used for the management, deployment and security of endpoints, to Microsoft Intune, a cloud-based, next-generation solution. In addition to providing much greater flexibility and better end-user experience, the Intune migration would save Outokumpu €120,000 annually.

"We had 414 applications in SCCM," Anttila says. "The vendor that manages our endpoints indicated they could test and migrate one application to Intune per business day. This manual process would have taken over four months to complete. My personal opinion is it would have taken much longer due to unforeseen complexities." In addition, with the resource cost to test and convert each application manually around €800 per application, Outokumpu was looking at a labor cost around €331,000. "And this was just for the applications impacted by SCCM to Intune migration," Anttila adds.

To automate the testing process, Anttila turned to Rimo3. He employed a five-step process that was completed over a eight-day timeline

DISCOVER
116 applications were eliminated because they lacked shortcuts and another 90 failed due to a mix of installation errors. The remainder were moved to the Assess stage.

ASSESS
208 applications passed for AVD and Windows 11 migration.

MODERNIZE
170 of the 208 application packages were modernized into MSIX and tested for AVD.

AVD ASSESSMENT
The 170 modernized applications were retested against their target AVD image.

EXPORT
170 modernized application packages were migrated and exported to Intune.

Compared to the manual testing process proposed by Outokumpu's endpoint management vendor, the automated process using Rimo3 accelerated testing and migration by 97%—from 4 months to eight days.

Packaging Standardization Processes Improved

A final area where Rimo3 is delivering value is the standardization of application packaging. "Rimo3 serves as a type of QA for packaging," Anttila explains. "It verifies that packages are compliant with the new environment and that we can actually launch them on our customized operating system images. Previously, software engineers from our AMS partner would build applications on their laptop and hand them over." However, because they had not tested them on the actual systems where they would be running, they would fail. This created a lot of back and forth between the Outokumpu and their AMS partner teams.

"Rimo3 automates the manual testing and allows us to go back to the packaging team and tell them they are giving us code that isn't compliant with our production environment," Anttila says. "Over time, we've seen the amount of packaging submitted that fails to run on their assigned environment decrease substantially. This improves our productivity and saves us valuable time that can be spent in development and QA."

Accelerating Project Optimus

Modernization of application packages and migrating applications to the cloud at organizations like Outokumpu is critical. But the risk of migrating them often outweighs the benefits—at least from the perspective of the business. Incompatibility with Windows upgrades and associated security exposure can result in application downtime and disrupt operations and even revenue. Manual testing of applications in new cloud environments requires significant time and resources as well.

"There are a lot of 'unknowns' when it comes to migrating Windows applications to a new cloud environment like Azure," Anttila says. "Rimo3 automates application testing and removes the guesswork involved in modernization. It is enabling us to accelerate our move to 'cloud first' by migrating our applications to Azure Virtual Desktop on Citrix."