

The Power of Partnership

How Enquizit Helped the Wharton School
Innovate in the AWS Cloud



When migrating to the AWS Cloud, many organizations make the initial choice to go it alone. But making system-wide changes across an organization isn't an easy task. From defining goals to upskilling staff to determining which apps to move first, many businesses find they can't migrate as quickly or efficiently as they thought – and that the migration they're conducting isn't maximizing value.

This is where an expert partner can make a difference. Hiring a cloud migration partner not only speeds up the migration process, but it also ensures a solution that doesn't just duplicate your current on-prem efforts over into the cloud, but actually positions your organization for future business scaling and long-term success. That's why the Wharton School, the oldest collegiate business school in the country, opted into a partnership with the AWS cloud experts at Enquizit.

In this piece, we'll explore how our team stepped in to help Wharton two years after their original launch – and the long-term benefits our partnership brought to Wharton's AWS cloud migration process.

After about 12 months of internal cloud migration planning, there was still a lot of work to do. Time was ticking on the three-year timeline they had set for themselves, and Wharton stakeholders were struggling to accomplish the migration project alongside day-to-day organizational tasks. While creating an AWS focus group to support internal operations, they realized they could use some external support to move the mission along. That's when they brought in AWS, and their partners at Enquizit.

Assessing the Gaps

Enquizit's first task was identifying and addressing gaps in Wharton's current migration process. Using SkyMap, a versatile cloud migration orchestration tool, our team performed a Discovery effort, crawling through Wharton's systems and identifying redundancies and old or inefficient systems. During this process, we identified owners for each machine across departments, and determined which applications were on those machines.

We then examined each system through the lens of the "6Rs," to determine which systems should be retired, transferred, or re-visioned entirely in the cloud:

Drivers to the Cloud

When Wharton made the decision to transition to the cloud in 2017, there were two main motivators: the desire to maintain and cultivate their brand of excellence and innovation, and the need to free-up valuable real estate space on their campus in downtown Philadelphia. Their current on-prem datacenter was taking up expensive square footage that needed to be used for classrooms – by freeing up that real estate, Wharton knew the migration would pay for itself. But beyond their need for more physical space, Wharton was looking at cloud migration to stay ahead of the technology and business curve.



Rehosting



Replatforming



Repurchasing



Refactoring



Retaining



Retiring



Rehosting

The simplest and fastest solution – simply moving your current system into the Cloud without any recoding or retooling. This is also called a “lift and shift.” It doesn’t necessarily improve efficiency or change your network environment.

Replatforming

Like rehosting, but with a little boost. It might mean making a minor upgrade in your current system or moving your backend data to a more AWS-friendly platform.

Repurchasing

Basically, this is making a switch from one tool to another, more efficient or cloud-friendly version. So you might move from a datacenter bound application to an off-the-shelf cloud solution.

Refactoring

This option is the most challenging but can lead to amazing results. Refactoring is essentially recoding your entire application to optimize it for the cloud space. When you choose this option, you have to think about ongoing updates, but it can lead to the most effective, designer solutions.

Retaining

Retaining is simple: you don’t move an app to the cloud. If you make this choice, you have to find the right home for it – maybe in an on-prem datacenter, or another datacenter nearby.

Retiring

When you retire applications or servers, they disappear. You don’t need them in your new system, so they can go to a new home.

For Wharton, the focus was on addressing operational gaps, retiring orphaned or obsolete servers, and modernizing their back-ups and security tooling. In fact, using SkyMap we discovered that more than 40% of Wharton’s servers could be retired – saving on migration time and money.

Developing a Migration Plan

Once we identified gaps in the current system, it was time to focus on developing the proof-of-concept, or POC. This part of Migration Planning proves the new cloud environment is ready for mass migration.

Typically, Migration Planning involves applying a weight to each application based on difficulty of migration and how critical it is to the overall functionality of the network. Using these weights, Enquizit works with an organization to create a series of ranked criteria, that we then use to divide applications into migration waves. The first wave is a pilot project that tests the cloud environment and helps shape the runbooks, or migration guides, to guide mass migration.



Wharton had struggled to complete this process alone because of several organizational roadblocks that added an extra layer of complexity to their project. By partnering with Enquizit, Wharton was able to work these roadblocks into the MRP and develop an efficient migration plan. The three primary challenges Wharton and Enquizit faced included:



The migration could not interrupt class-time.

Wharton is an esteemed business school with rigorous coursework. For this migration to succeed, it needed to be unobtrusive – if down-time was necessary, it had to be scheduled for the short windows when students were not in class.



Wharton had to coordinate with UPenn.

Though Wharton operates independently in many ways, it falls under the UPenn administrative umbrella. Because of that, it was necessary to coordinate with UPenn to make certain networking changes, many of which happened at the time of migration.



It had to be transparent for server owners and application stakeholders.

Wharton is decentralized, which meant tracking down exactly who owned and operated each server was more challenging than it might have been at other organizations. The MRP had to include time to track down and communicate with server and application owners before migration.

After working closely with Enquizit to rank and identify the ideal applications for their Migration Pilots, Wharton chose five relatively low-risk programs for the first migration wave: five applications on twelve servers that only impacted the Wharton computing community, but which tested the success of database, authentication, and Active Directory dependencies.

Sharing Knowledge Now, and in the Future

Choosing which apps are right for the Migration Pilot is important not just in the development of a migration plan, but also to ensure the best education for the organization. During the POC, Enquizit's training and education process became the priority. The migration pilot provided a hands-on training environment to support the ongoing education of Wharton's IT staff, so that they would be empowered to run the system after the migration was over.

The training process included a Migration Workshop, during which we explained the migration pilot process, and set expectations for the pilot alongside Wharton staff. The workloads that Enquizit and Wharton chose for the pilot were developmental, which meant that the team could afford to take more time tracking the process, making alterations, and developing runbooks to use as a template for mass migration. Slowing down during the pilot process allowed the Wharton team to learn with our experts by their side, and the collaboratively authored runbooks became a manual for Wharton's future migrations.

This period of expertise sharing, training, and guidance is what differentiates Enquizit from other cloud migration experts. But Enquizit's ad-hoc job training wasn't only an organizational benefit – it also supported Wharton's educational mission and brand of excellence.



Mass Migration and Troubleshooting

After the MRP was complete, Enquizit didn't just disappear. Hands-on learning continued during the mass migration phase, as our team worked with Wharton to support troubleshooting and provide guidance to ensure a top-quality final solution.

In our work with Wharton during mass migration, our partnership became about balancing the goal of maintaining uptime during class sessions with completing migration during the designated timeframe. Enquizit offered flexible support during this complex process, particularly around the migration of a mission-critical legacy system that required higher bandwidth than was available through the current Aviatrix appliance which implemented an IPSEC tunnel between Wharton and AWS. This was one of the most important parts of Wharton's migration project, but it was deliberately delayed for months to avoid disrupting class time.

To upgrade that bandwidth, Enquizit and Wharton put their heads together to determine when certain systems could be down. Instead of doing that migration over the summer, they chose a two-week period during the December holidays when there were no classes at all in session. Though this wasn't the original plan, it was the best possible option for the Wharton community.

For Enquizit, an essential part of the troubleshooting and migration process is focusing on the client's mission. Being a flexible partner means sharing priorities – for Wharton, that meant scheduling migration around class time to guarantee that the process didn't disturb learning. By sharing a client's priorities, we can help them develop a cloud process that fits their mission. By necessity, this isn't a one-size-fits-all model, because each organization has different needs and different pain points.

A Partner in Innovation and Excellence

As internationally recognized authorities on business and management, the Wharton School knows the value of partnering with an expert. They chose Enquizit as their AWS Cloud Migration partner because they needed an innovative and agile Cloud network who would empower them to be able to make innovative, forward-thinking decisions for years to come.

At the beginning of the AWS cloud migration process, Wharton's team leader, Sam Smith, wrote in one of his many **blog posts**: "Today we speak Datacenter, and we all will have to learn to speak Cloud." As a partner through the entire migration process, our team shared best practices with Wharton on AWS Cloud design and migration, serving as translator, teacher, and guide. The long-term benefits of this shared expertise are immense; today Wharton not only operates on the Cloud, they can speak Cloud, too.

After two slow years of working alone, Enquizit was able to complete the Wharton School's mass migration in only 8 months. With Enquizit's help, Wharton was empowered to move forward with confidence in their cloud environment to continue operating efficiently, long after the project ended. The long-term value of this partnership is rooted in training and education – it's not just a one-off service, it's an investment in a new way of thinking.

Enquizit is an AWS Advanced Cloud Partner with years of experience helping our customers break down the cloud-migration process into streamlined, goal-oriented steps.

Interested in learning more about how we can help? Visit <https://enquizit.com/services/cloud-migration-services/> to learn more.

