# Automated manual deployment processes and aligned business agility initiatives to save the cost of around $1,57,000 USD per annum

A Singapore based **3D Printing Solutions** provider needed to improve the lack of visibility into resources coupled with multiple layers of bottlenecks in application performance.

They selected **Enhops** to identify errors, address performance bottlenecks, and implement real-time bug/issue remediation to address their performance inefficiencies and memory issues.
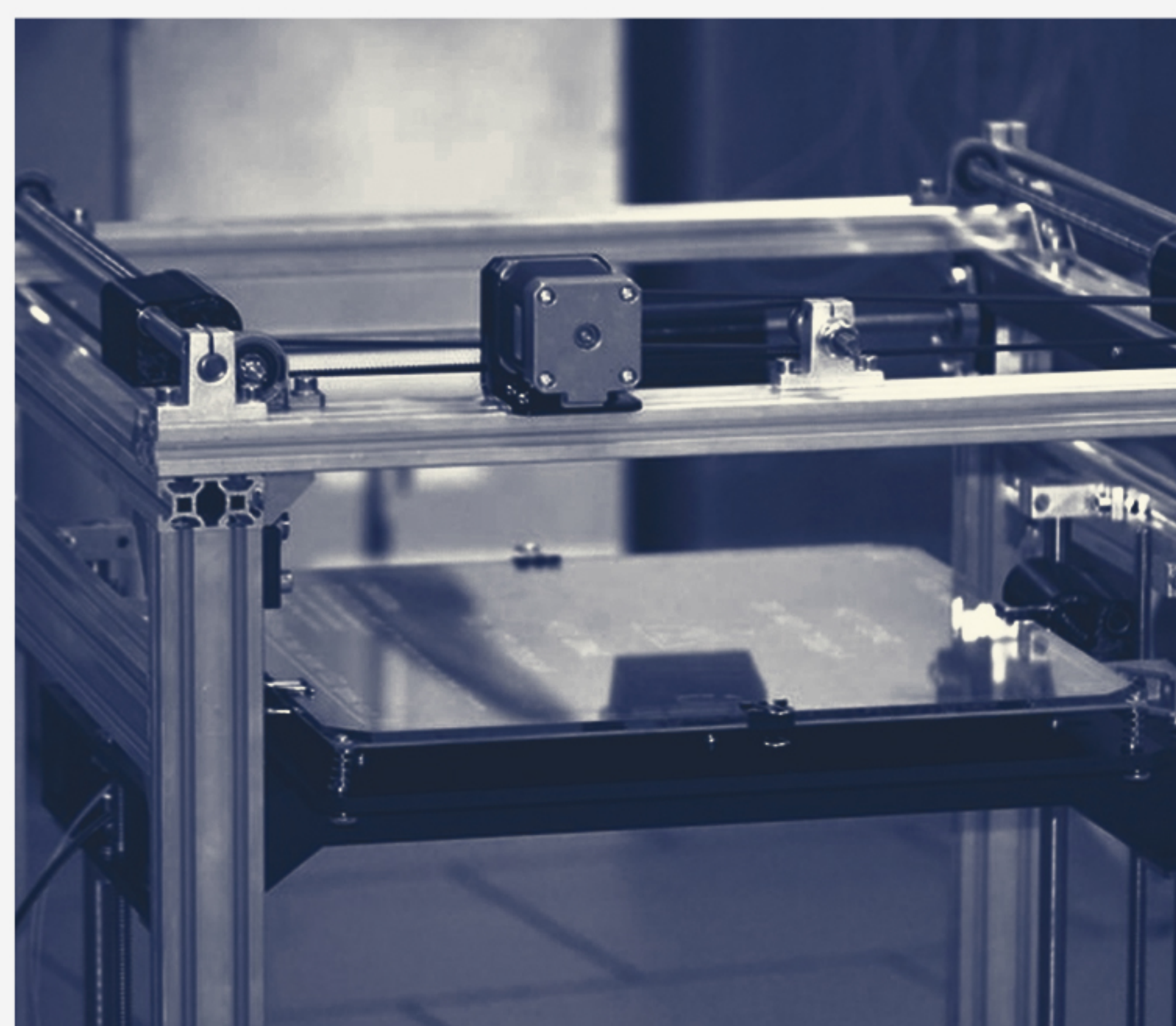
## THE CHALLENGES
# 6 Key Areas of Concern
An initial assessment of the client's existing situation brought out a few challenges:

Identification of framework and creation of single framework for all the IT applications

Integration of business agility with IT agility by automating manual deployment processes

Identify root cause of performance/memory bottlenecks at multiple layers

CI/CD pipeline is not configured to deploy their application

Lack of proper monitoring setup to alert the issues that are caused in the environment

Lack of centralized log management to identify the errors and real time bugs/issues

## Enhops's Solutions

# 4 Key Solutions
We started with understanding existing application architecture, business needs, and user scenarios.

Centralize log management & set up proper monitoring to alert the issues. Understand logical data flow, Database structures, schemas, web services protocol, thick client technology, authentication process.

Implemented AWS open search dashboard for log management and set up the pre-prod environment to help developers to release the new features in pre prod first for validation.

Configured Prometheus and Grafana to monitor the real-time events in the environment to address the company's minimal visibility of the resources.

Fixed the CI/CD pipelines configured in the GitHub actions, so developers can integrate code several times daily to detect errors faster and reduce software release cycles.

## Results

# 4 Key Outcomes
DevOps pipeline issues resolved and the client team has been able to test frequent use-cases that have assisted the development of their product GTM. A proper monitoring setup has also been installed and Prometheus and Grafana provide them with complete visibility into their environment.

**1** Hardened the complete environment in both server and infra level reduced the security risks.

**2** Identified and hardened the security aspects like firewall hardening, and removing the exposed secret keys.

**3** Configured CI/CD pipeline helped the client release multiple feature updates and revert back with minimal effort without affecting the production in case of failure.

**4** Identified and removed unused resources from AWS which helped in saving cloud costs of $1,57,753 USD per annum.

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