cloudvane

CASE STUDY

Cloud-powered innovation: HEP

Bringing out-of-date technology and processes into the cloud era

cloudvane

KEY DRIVERS

- Manage more than 20 Operative Companies in a single holding with decades of operations
- Unify a diversity of core business processes and supporting applications
- Mitigate challenges arising from technology and processes deployed years ago

KPI's

4x
smaller system administration team

70%
shorter time-to-market for new products

0%
increase of infrastructure budget

KEY ENABLERS

- Standardized development practice across the entire portfolio of products and services using proven methodologies
- Future-proof cloud infrastructure that can easily scale to meet business needs
- Proactive management and actionable insights on all financial aspects of the new cloud environment

ABOUT

HEP

INDUSTRY
Energy Industry
PRODUCTS / SERVICES
Electricity production, transmission and distribution; heat supply and gas distribution

SOLVING BUSINESS AND IT CHALLENGES IN ONE SINGLE SWOOP

Consulting a company of HEP's size and long history required special consideration from our part. When considering the challenges they faced, we always kept the business side in mind.

Here, HEP faced three major challenges:

Consumer Experience

As younger generations become a predominant consumer profile, they introduce a behavioural shift driven by increased expectations. Today's consumers are used to the convenience they are provided with by other highly digitized and customer-oriented industries like Telcos, banks and media providers, who set the bar very high when it comes to consumer experience.

Utilities companies are investing heavily in new, digital products and services to keep pace with the market, and it is becoming increasingly difficult to support new services with traditional solutions based on on-premise infrastructure.

CHALLENGES

Operational Efficiency

Utilities companies find themselves under constant pressure, both from competition and regulators. Global trends call for a green transition, where sustainability goals become a priority number one. Volatile energy prices on one side and increased demand on the other are forcing utilities to rethink their operational efficiency.

Utilities are aiming to become more cost-effective and risk-resilient by carefully managing core business activities, such as reducing maintenance costs, balancing supply and demand, and others.

New Business Models

With the proliferation of electric vehicles, power companies are developing a new network of charging stations, which in turn require new payment models to be designed. Wide adoption of smart home products is uncovering new opportunities for utilities like remote power management. Integrating distributed energy resources into the grid is posing a new set of challenges, as any consumer can now become a generator.

As utilities are undergoing this core transformation, it is becoming more critical than ever to ensure a quick turnaround from ideas to innovative products and services.

As early adopters of digital transformation principles, HEP made significant investment into their infrastructure years ago. They needed to resolve typical challenges that have emerged from legacy technology and processes.

CHALLENGES

Here are the six IT challenges that were identified in the initial phase of the project:

1. **Monolithic architecture**
   Improving the performance of legacy applications often resulted in upscaling all system components, instead of only the ones under additional strain.

2. **Increased scaling cost**
   New services were planned to intermittently cause extreme peaks in user volumes. Investing in on-premise infrastructure to cater for occasional increased demand was neither practical nor cost-effective.

3. **Isolated DEV/TEST infrastructure**
   Dev/Test environments were isolated and scattered across different business units, making it difficult to put in place a proper governance model, causing both resource waste and issues with end product quality.

4. **Continuous maintenance**
   Business applications and services required continuous maintenance, reducing the bandwidth of system administration teams to provision infrastructure required to serve new projects and initiatives.

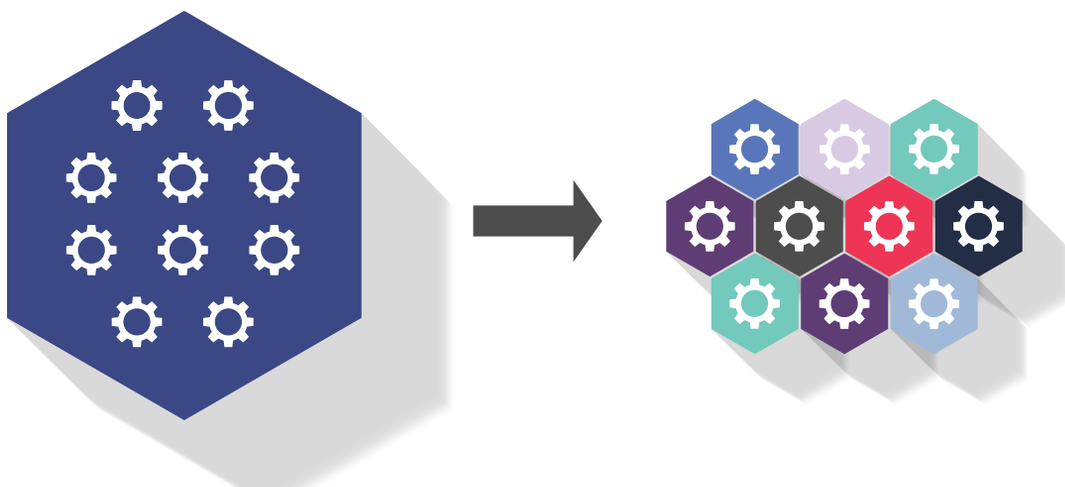
5. **Prolonged development lifecycle**
   Increasing numbers of digital services generated demand for scalable hardware resources. Current IT and procurement processes could not keep up with the pace of changes.

6. **Limited budget**
   Taking advantage of the cloud's inherent flexibility and agility meant that the company needed to change their spend mindset and budgeting control procedures to be able to make the switch towards the cloud operating model.

MICROSERVICES AND CLOUD AUTOMATION

The project was pushed forward by both sides agreeing to the following objectives:

- breaking up the monolithic architecture into smaller, more manageable microservices and rightsizing them
- pushing infrastructure costs to responsible business units and projects consolidating and setting up centralized development and testing environments based on industry best practices
- facilitating automation of cloud management tasks across all cloud environments
- setting in place tools and processes to enable continuous monitoring of cloud spend and budget compliance



MONOLITHIC ARCHITECTURE

MICROSERVICES

SOLUTION

BRINGING PROCESSES UP TO DATE

The increasing number of digital services accompanied by the number of their users, both internally and externally, generated a demand for scalable hardware resources. HEP's IT and procurement processes at the time could not keep up with the pace of changes.

The most logical approach was to migrate core applications and services to the cloud and take advantage of cloud's inherent flexibility and agility. HEP was aware of the need to update their spend mindset and budgeting control procedures to be able to make the switch from a "server room" operation towards a "cloud only" state of mind.

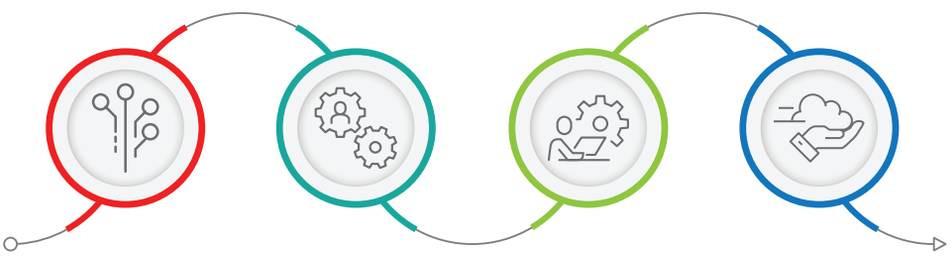
For example, efficient demand planning requires enormous volumes of data from consumers, the grid, and other edge devices. Managing all this data requires hyper-scalable infrastructure that can only be achieved in the cloud.
In order to ensure a quick turnaround from ideas to innovative products and services, utilities can't afford traditional product lifecycles that are hindered by outdated procurement and development methodologies, and are increasingly relying on the cloud's inherent flexibility and agility. This complex project was executed in several stages.

SOLUTION

Stage 1 - Extend to Cloud

To ensure the shortest possible duration of the migration, we used our proprietary methodology based on best industry practices – CloudStart.

The methodology consists of four steps. It started with the assessment of HEP's cloud readiness, setting of roadmap and timelines, and the creation of a custom cloud strategy. Once all sides had agreed on the roadmap, we started building HEP's cloud environment design and cloud integration list. Step 3 is when we migrated HEP into the cloud and began environment optimization.This resulted in continuous management, monitoring and improvement of their Cloud.



INTRODUCE AND CUSTOMIZE

- Roadmap & Timelines
- Implementation cost
- Cloud Readiness Assessment
- Recommendations, Cost & budgeting
- Cloud Strategy

BUILD AND INTEGRATE

- Environment design
- Cloud integration list
- Cloud resources catalogue
- Network connectivity diagram

MIGRATE AND OPTIMIZE

- Cloud migration
- Backup and Restore procedures
- Analytics procedures
- Performance trends and recommendations

MANAGE AND MONITOR

- Continuous improvement model
- Proactive monitoring
- Support access and procedures
- Periodic upgrades

CloudStart Methodology

KEY ACTIVITIES

Cloud onboarding
Identity and security
Provisioning of resources
Hardening of security

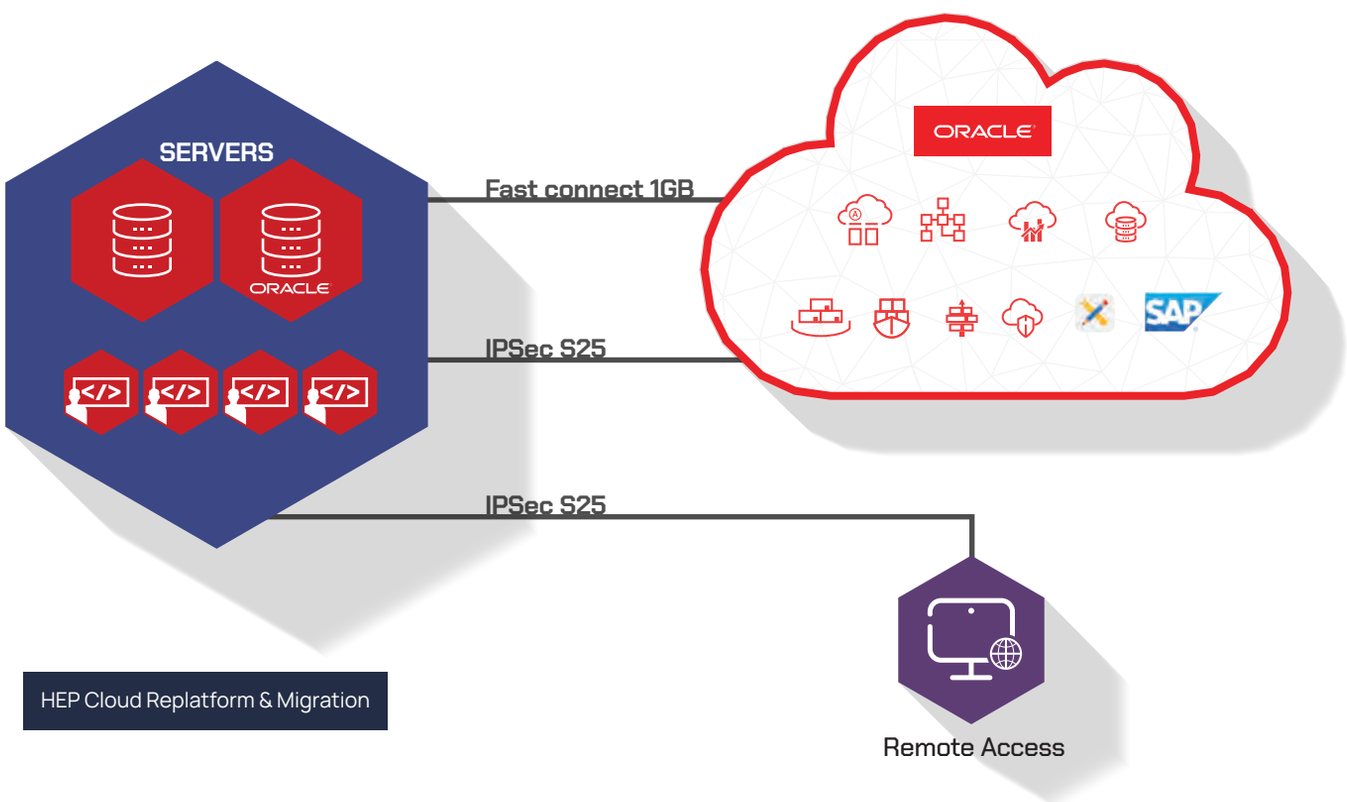
SOLUTION

Stage 2 - Cloud Native

We identified and planned multiple activities during the second stage in order to achieve HEP's development related goals. These are as follows:

- rapid application development
- transition of existing application development cycle and application support
- moving development, testing and production environments into cloud
- internal enablement and development of competency
- change in the way of thinking about application development

The implementation path was segmented into three streams. In the first stream, core application development was transformed to a Cloud Native environment. In the second stream, SAP was migrated to Cloud. The third stream was all about transforming APEX development to DevOps lifecycle.



SOLUTION

KEY ACTIVITIES

Cloud Refactor Core Production Applications

Implementing DevOps to enable refactoring of core production applications based on Managed Kubernetes cluster, CI/CD tools

Migrating core production applications to Cloud and transforming the monolith application into microservices

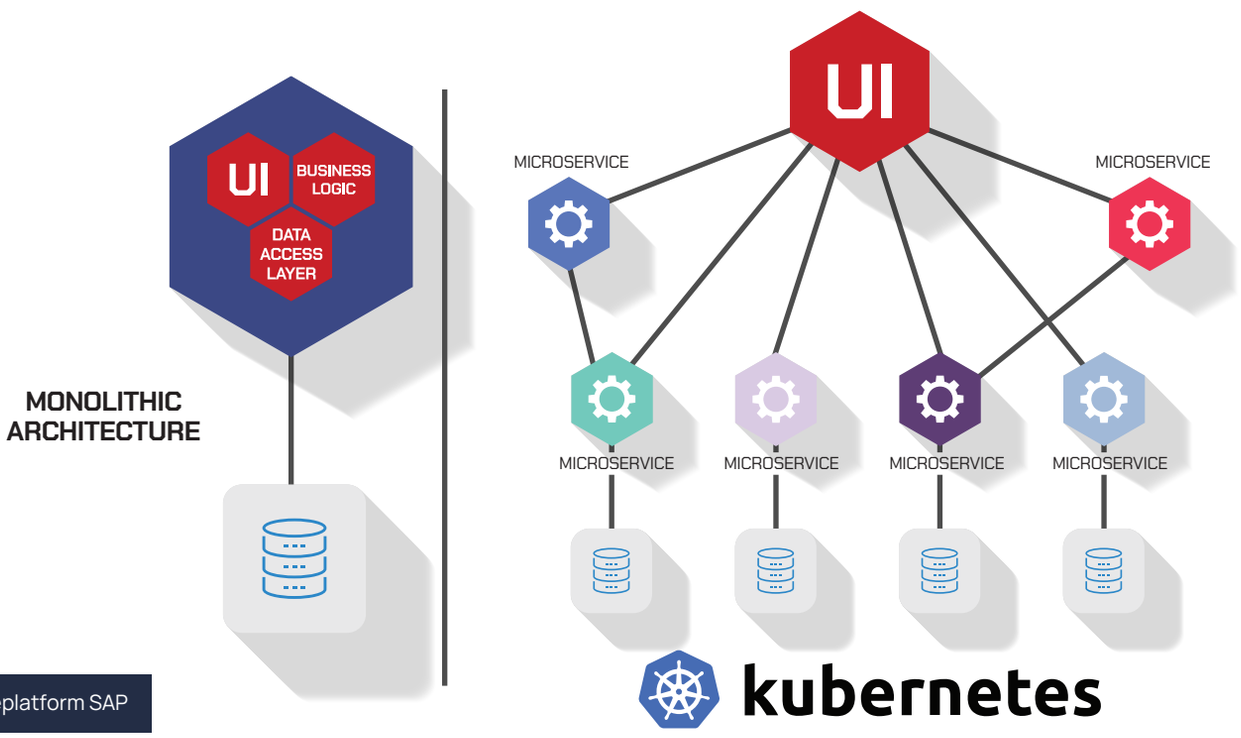
Cloud Migration - Replatform SAP

Extending the SAP test environment to cloud and providing better scalability and performance
Enabling testing with a newer dataset than the one used in the existing environment

Cloud Migration - Migrating APEX

Implementing DevOps for Apex to enable a faster and more secure development based on managed services that lower administrative tasks

Develop new applications on a consolidated environment
Migration of the existing application to consolidated environment

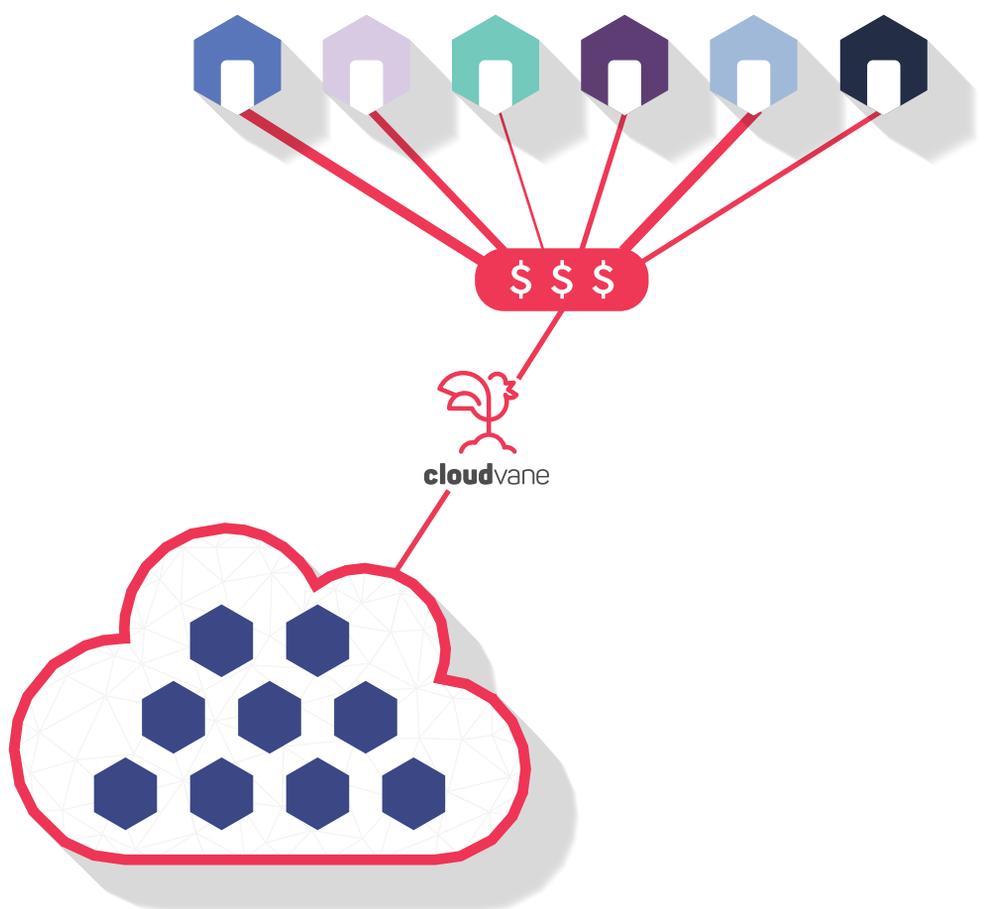


Replatform SAP

Stage 3 - Cloud Financial Management

HEP's migration to Cloud brought forth a new set of challenges, primarily related to cloud cost management and resource optimization. We recommended FinOps, the practice of bringing financial accountability to the variable spend model of cloud, enabling distributed teams to make business trade-offs between speed, cost, and quality.

FinOps was implemented into HEP's daily operations in the easiest and most effective way – through CloudVane. Thanks to this, HEP achieved an overall visibility enabling them to better manage their cloud resources through advanced automation and scheduling, cost allocation, recommendations, reports and other features.



COST ALLOCATION via CLOUDVANE

SOLUTION

KEY ACTIVITIES

FinOps implementation for cloud cost optimization

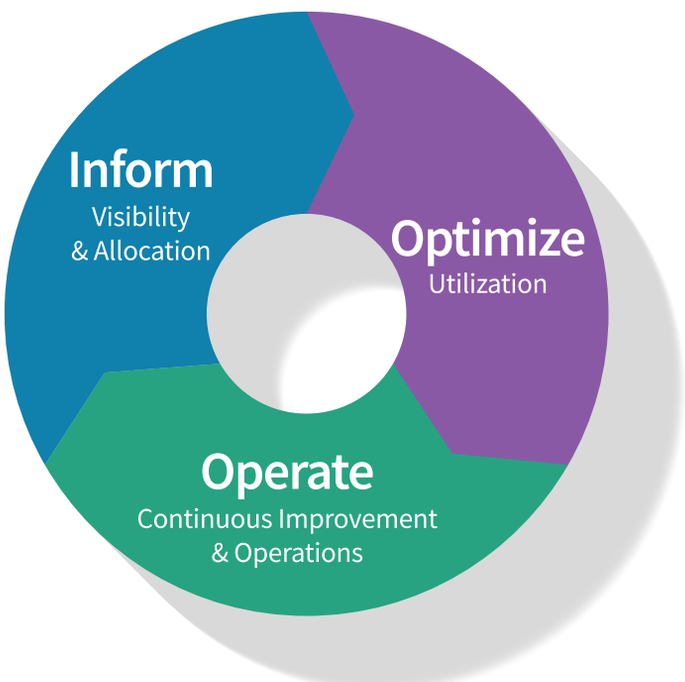
- CloudVane deployment
- FinOps enablement
- CloudVane enablement
- Waste mitigation through optimization
- ROI monitoring

CloudVane automation

- Cloud environment management
- Resource discovery
- Resource classification & grouping
- Automation scheduling

Cost allocation

- Granular cost allocation based on actual cloud consumption
- Cost group definition
- Resource allocation
- Cost groups budget definition
- Cost visibility



Inform
Gives you the visibility for allocation and for creating shared accountability by showing teams what they're spending and why.

Optimize
Empowers your teams to identify and measure efficiency optimizations, then make goals based on those opportunities.

Operate
Defines and executes processes which enable the goals of Technology, Finance, and Business to be achieved.

KPI'S, METRICS AND RESULTS

Throughout the entire project, we helped HEP make significant improvements and optimizations in their daily operations, strategic goals and future innovation plans. Some of those achievements are:

- optimized performance and security of business applications and improved user experience
- enabled granular cost distribution to business units based on actual cloud consumption
- streamlined application development processes and reduced time-to-market for new services
- significantly increased and improved infrastructure landscape while remaining fully within the cloud budget

OVERALL RESULTS

4x smaller system administration team

70% shorter time-to-market for new products

0% increase of infrastructure budget

ABOUT HEP

Hrvatska elektroprivreda (HEP Group) is a national power company in Croatia. They have been engaged in electricity production, transmission and distribution for more than a century, as well as heat supply and gas distribution for the past few decades.

- 20+ Operative companies with over two decades of business operations
- Diversity of core business processes and supporting applications
- Early adopters of digital transformation principles

7.330 GWh
Total sales
el. Energy in Croatia

HRK 2.057 mil
marketshare Croatia

91%
Adj. EBITDA

ABOUT CLOUDVANE

CloudVane is a cloud cost management and automation solution that consolidates your multicloud cost and usage data. It enables overall visibility of cost so enterprises, organisations and start-ups can better manage their cloud resources through advanced automation and scheduling, cost allocation, recommendations, reports and other features.

CloudVane is rooted in FinOps, an emerging new practice area that brings financial accountability to the variable model spend of the cloud and helps enterprises master cloud unit economics.

By implementing FinOps methodology through CloudVane features, every customer is facilitated to introduce the best FinOps practices into their company or organisation in the simplest way possible.

CloudVane is part of the Oracle for Startups, a unique acceleration program that enables mutually beneficial business-building partnerships for startups, Oracle and their customers.