



Grid Dynamics Solutions

Cloud and Application Modernization

www.griddynamics.com

 **Grid Dynamics**
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Thought Starters: Cloud and Application Modernization



Create operational efficiencies migrating to the cloud



Capture substantial value from improved efficiency

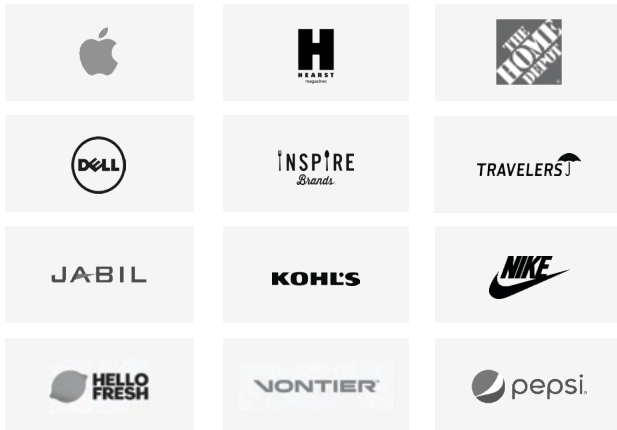


Cut operational and maintenance costs

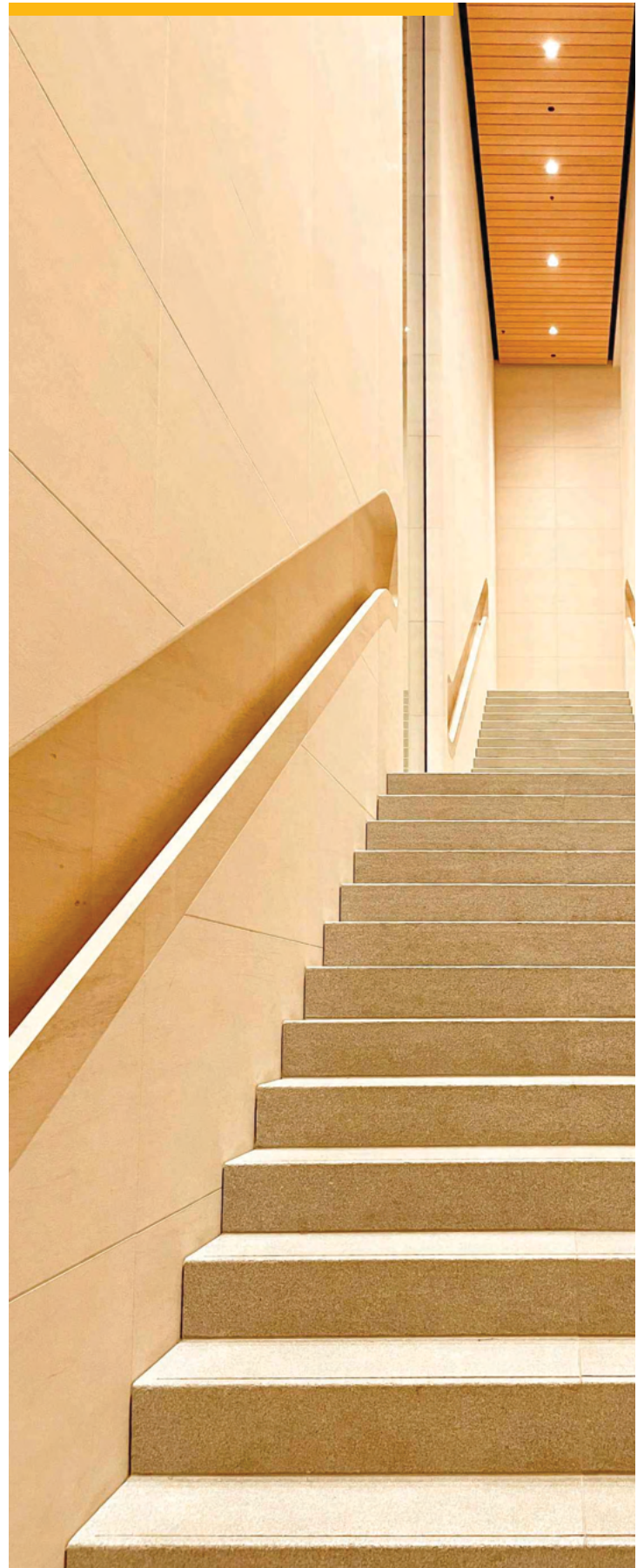
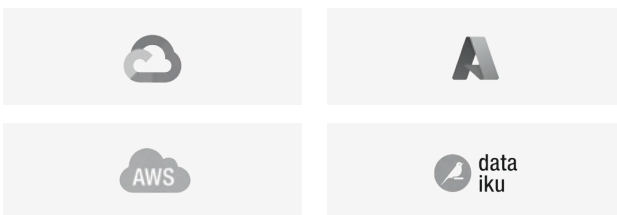


Uncover new revenue and growth opportunities

Some of our clients in the area of cloud and application modernization



Our partners



Solutions: Cloud and Application Modernization

We provide services from inception through development into production engineering up and down the technology stack and across leading clouds with ability to dramatically accelerate adoption of microservices and advanced analytics platforms. Our significant experience in this domain spans industries including technology, retail, manufacturing, and finance.

Application & Data Replatforming

Unlock the true value of cloud. Target high-value transformative applications and data. Dive deep into the current state of monoliths and database platforms, decompose the software and data elements and recompose them in a cloud-native microservices platform. Remove barriers by leveraging our design and engineering to rearchitect hundreds of applications with direct business value.

Microservices Acceleration

Our microservices platform accelerates deployment to AWS, Google, or Azure from months to weeks. Our PCF to K8S starter kit further accelerates applications moving off Cloud Foundry. Deployed as an Infrastructure as Code blueprint, our solution includes foundational capabilities to manage containers, APIs and credentials, and is designed for zero-trust and observability.

Quality Engineering

Our Product Oriented Design approach to software engineering focuses on driving velocity with minimal defects. We leverage mature testing practices and our DevSecOps capabilities (automating scans and tests) to ensure the system performs at scale and under stress. When coupled with our chaos engineering, we proactively design for failure and improve from RCA and post-mortem reviews.

DevSecOps Foundation

We establish CI/CD tools and Agile processes that enable companies to release changes in minutes, deploy 100s of changes in parallel, increase reliability and stability, and reduce cloud environment costs. Our standardized DevOps tools and processes help clients reduce operational costs and accelerate time to market. Our platforms are deployed as blueprints and tailored to application requirements.

Center of Excellence

We establish cloud governance for large organizations that covers architecture, development, financials (FinOps) and security. Our architecture frameworks govern key architectural decisions needed during a large transformation. In today's increasingly sophisticated and costly cloud ecosystems, we offer a unique and proven methodology for reducing cloud costs, optimizing usage efficiency, resiliency, and tuning performance.

Reliability & Chaos Engineering

As natives of cloud platforms and custom application development, our team often partners with clients in SRE roles leveraging advanced technologies to observe, automate, run analytics, leverage ML, and continuously improve the full stack. We apply techniques like chaos engineering to constantly experiment and test the performance, stability and security of any given system.

Cloud migration for a leading restaurant company

After a series of acquisitions, a leading restaurant company had several outdated eCommerce platforms with zero technology, tooling or process unification.

Grid Dynamics was engaged to design and implement a new cloud infrastructure in Azure, establish CI/CD processes, build a microservices platform, and perform application modernization for the legacy eCommerce components.

Outcomes

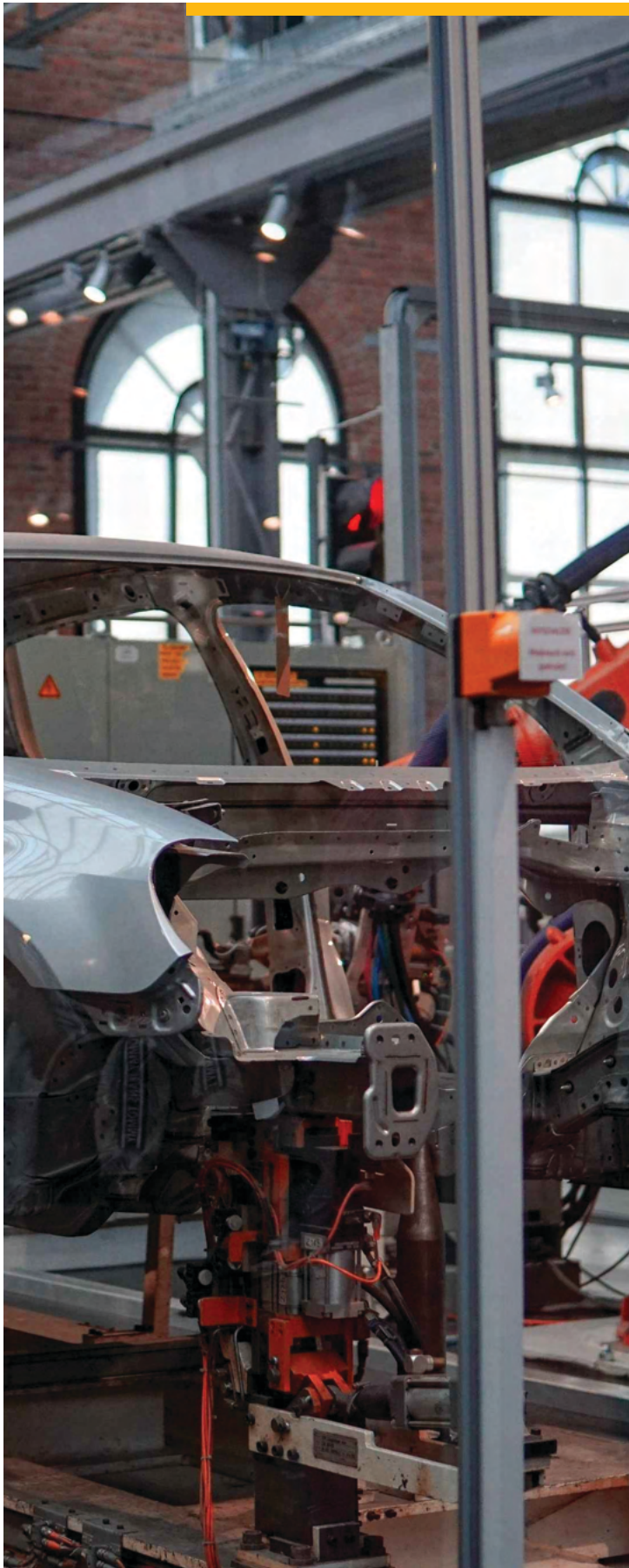
multi-brand
architecture

60+
microservices created

8
major brands unified

- Kubernetes-based microservices platform.
- Integration with external security validation tools.
- Advanced platform-level capabilities: lifecycle management (scaling, failover, etc.), service mesh, service registry & discovery, secret management, business configuration management, load balancing.





Private cloud for a leading auto manufacturer

The changing development, analytical, and manufacturing processes at a leading automotive company required robust processing power to support complex operations distributed across many geographies. Grid Dynamics was engaged to design, implement, and manage massive Kubernetes clusters hosting multiple workloads. Due to their size, it was prohibitive to run most of them on the cloud.

3

isolated geo-regions;
mix of VMs, bare metal, and cloud services

~90%

of infrastructure is on-premises

Outcomes

50

fully automated and managed Kubernetes clusters, with plans to expand up to 200

3

parallel tracks of engagement
(platform engineering, microservices platform, SRE)

- End-to-end k8s cluster deployment automation, including starting off bare metal, setting up monitoring, policies, and seamless upgrade plans.
- Continued support on the SRE side allowed for rapid growth while continuing to provide reliable infrastructure.
- Separate project spawned to provide a management platform layer, including cluster inventory, orchestration, identity management, and APIs to interact with other systems.

A major retailer spins off a multi-cloud parcel shipping platform

A major retailer implemented a parcel shipping platform to solve shipping challenges for retailers and brands to compete at all levels.

Grid Dynamics was engaged to design and deliver a microservices platform to support their new shipping platform via IaC. The platform team was responsible for setting cloud standards and provisioning infrastructure via IaC, as well as implementing DevSecOps and migrating existing apps from Azure to GCP.

2

isolated geo-regions;
mix of VMs, bare metal, and cloud services

multi-cloud

Azure and GCP

Outcomes

multi-cloud solution

fully automated and managed Kubernetes clusters, multi-cloud & region

4

parallel tracks of engagement
(platform engineering, microservices platform, cloud migration, SRE)

- End-to-end k8s cluster deployment automation, setting up monitoring, policies, seamless upgrade plans, and data segregation for compliance.
- Cloud-native as well as cloud-agnostic technology selection & implementation for API Gateways, CDN, Nextgen FW, VDI Solutions & SaaS Secure File Transfer.
- Continued support on the SRE side allowed for rapid growth while continuing to provide reliable infrastructure.



Our Technologies

We created a strong lineup of starter kits that helps to significantly accelerate the delivery of typical projects and reduce time to market. These starter kits are developed in close collaboration with partners such as Amazon, Google, and Microsoft.

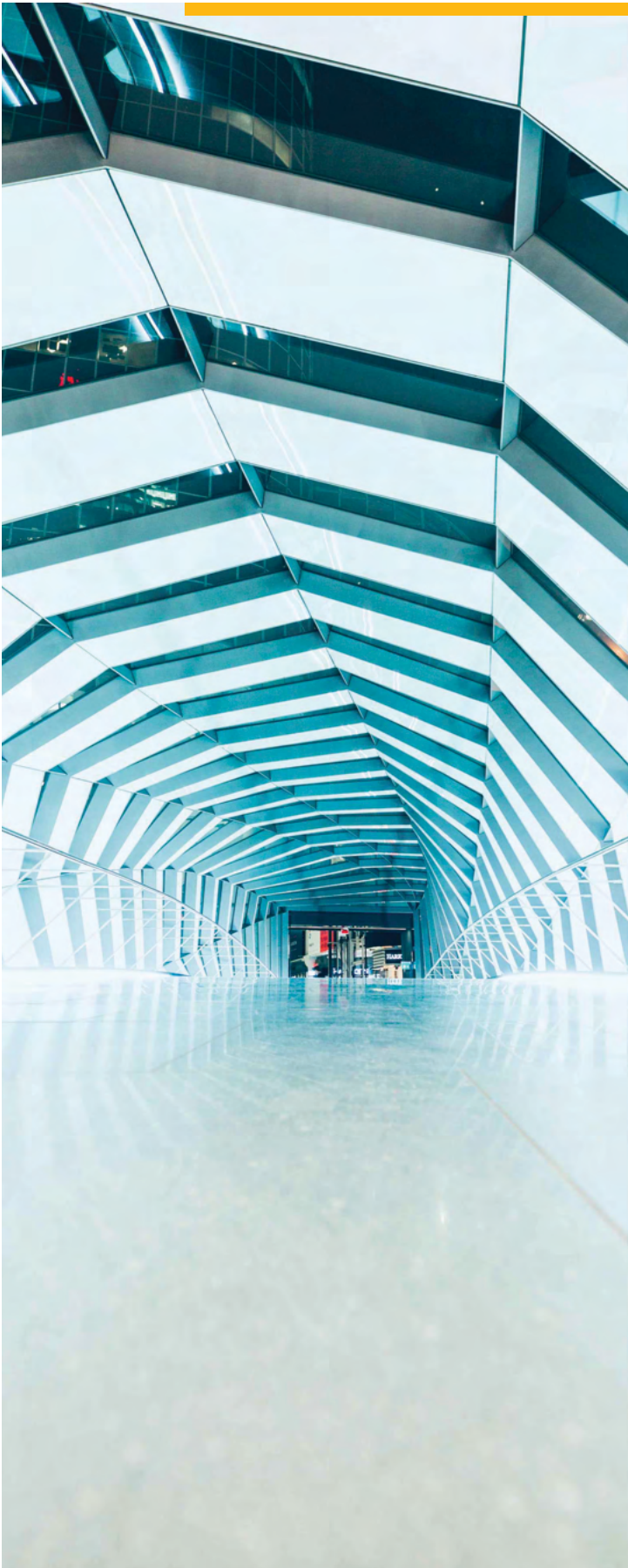
Microservices Platform

We provide starter kits for rapid provisioning of scalable microservices platforms and CI/CD pipelines on AWS, Azure, and GCP. You can deploy a preconfigured cloud-native Kubernetes platform that includes the following services:

- App/container management
- Configuration management
- Logging & Monitoring
- Route management
- Credential management
- API management

Cloud Foundry Migration

We provide a starter kit for automatic migration from Pivotal Cloud Foundry to a cloud-native microservices platform. The starter kit automatically pulls applications from your source code repository and generates full CI/CD pipelines for repackaging and deploying these applications to the cloud.



Engage with Grid Dynamics

1

Our team of cloud and enterprise technology experts work with you to **define roadmaps** for cloud migration, application modernization, or other enterprise capabilities.

2

We work with you to define an optimal **engagement model** that can include both your and Grid Dynamics teams. We leverage our **starter kits** built using open source and cloud-native components to accelerate the implementation.

3

We deploy **cross-functional teams** with proper domain/technology leadership to execute projects from the roadmaps and deliver solutions end-to-end. Our teams usually work with clients' stakeholders and product owners in a **co-innovation** model.

4

We focus on **iterative execution** of the roadmaps to deliver business value in short phases, but also continuously **refine the strategy** and come up with improvement proposals.

5

The co-innovation approach helps you to **establish a strong technology culture** in your organization, efficiently manage the roadmaps, and scale your cloud and DevOps capabilities.

About Grid Dynamics

Grid Dynamics is a global digital engineering company that co-innovates with the most respected brands in the world to solve complex problems, optimize business operations, and better serve customers. Driven by business impact and agility, we create innovative, end-to-end solutions in digital commerce, AI, data, and cloud to help clients grow.

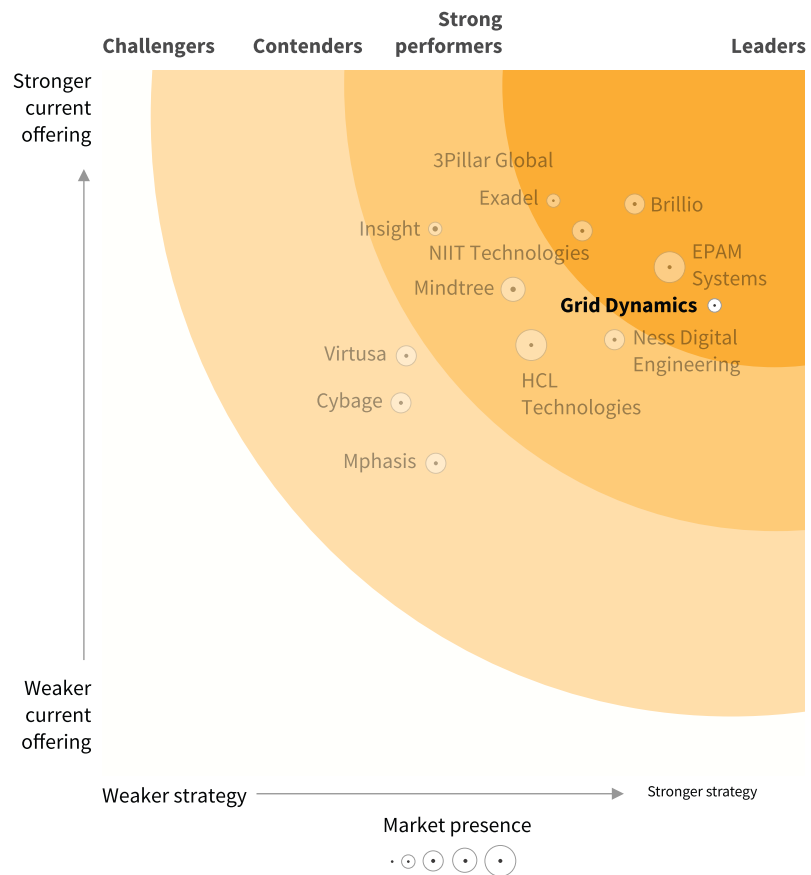
Headquartered in Silicon Valley, with delivery centers located throughout the globe, Grid Dynamics is known for architecting revolutionary digital technology platforms for 7 of the 25 largest retailers in the US and 3 of the 10 largest consumer goods companies in the world, as well as leading brands in the digital commerce,

manufacturing, finance, healthcare, and high tech sectors.

Our secret sauce? We hire the top 10% of global engineering talent and employ our extensive expertise in emerging technology, lean software development practices, a high-performance product and agile delivery culture, and strategic partnerships with leading technology service providers like Google, Amazon, and Microsoft.

In 2019, Forrester named Grid Dynamics a leader among midsize agile development service providers. In 2020, Grid Dynamics went public and is trading on the NASDAQ under the GDYN ticker.

The Forrester wave™
Midsize Agile Development Service Providers Q2 2019





About Grid Dynamics








Key facts

- 12 countries across North America and Europe
- 4,000 employees in Q2 2022
- Forrester Leader Midsize Agile Software Development Service Provider Q2 2019

Areas of expertise

- **Experience engineering**
Web | Mobile | AR/VR
- **Data Science and AI**
Search | Personalization | Supply chain | IoT
- **Platform engineering**
Microservices | MACH | Composable
- **Data engineering**
Big data | Streaming | MLOps
- **Cloud and DevOps**
CICD | AIOps | SRE | QE

Clients

	Google	
align		
RAYMOND JAMES		AMERICAN EAGLE
LVMH		



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