

Monolith to Microservices

A practical overview



Modernization has come to mean a wide range of things over the years, from rewriting applications in newer programming languages, to moving mainframe applications unchanged to the cloud. All these definitions fall short of the real purpose of modernization, which is to ensure that an organization's IT systems can support the modern demands of its business.

There are three key aspects that must be considered in any effort to ensure that IT systems are able to support and adapt to the needs of a business:



Application modernization for innovation

Executing important application changes and supporting Application Programming Interface (API) initiatives and cloud-native technologies to expose and integrate trusted functionality as new services



Process modernization for velocity

Establishing at scale the steps needed to understand, identify, implement and test crucial business system changes and new functions

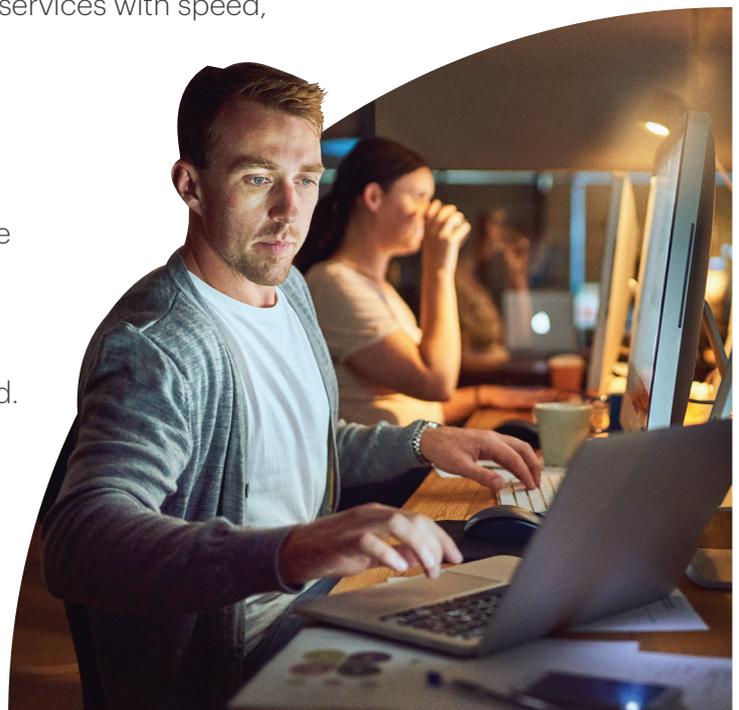


Infrastructure modernization for flexibility

Maximizing the opportunities offered by cloud computing and containerization to deploy new business services with speed, flexibility, and in a cost-effective manner

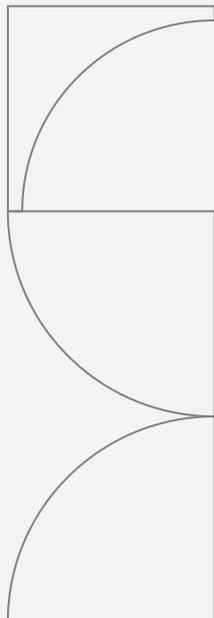
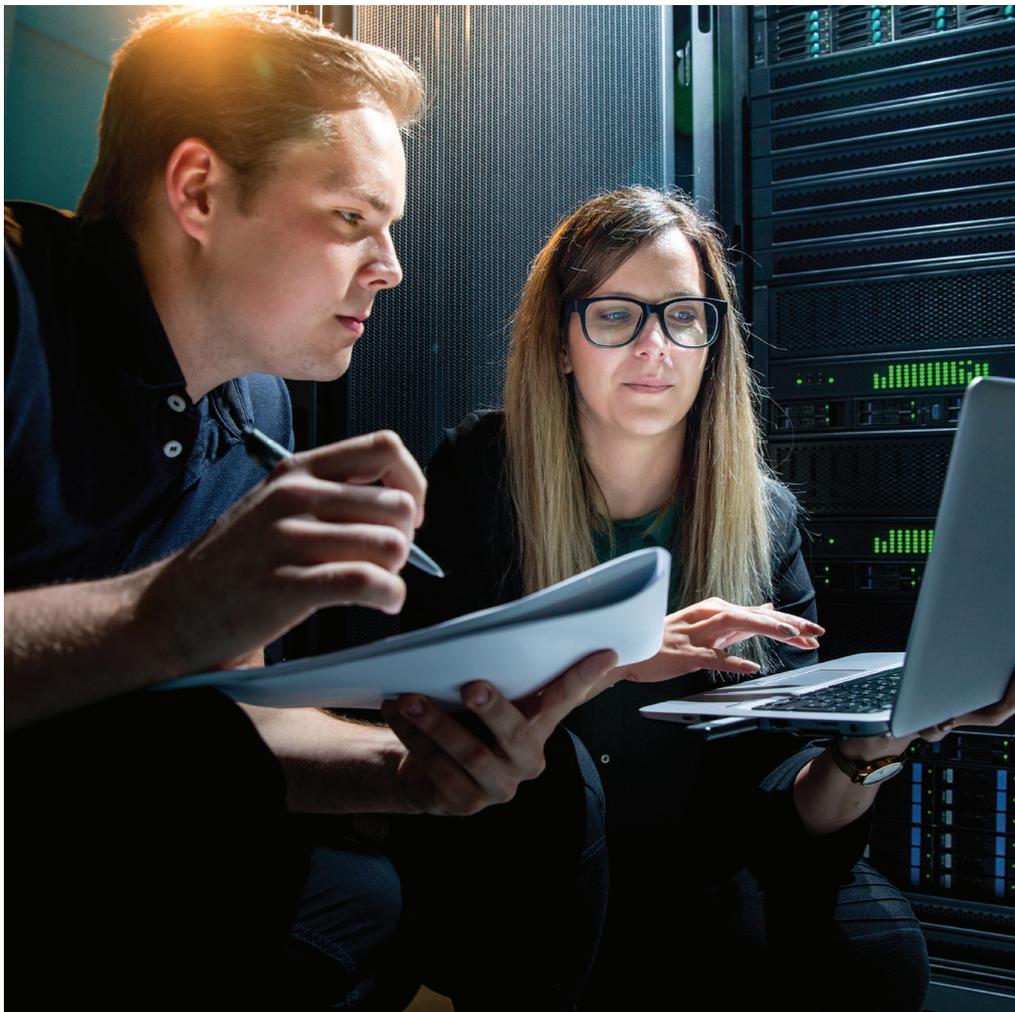
Quickly achieving flexibility promised by modernization is risky and challenging. It doesn't necessarily realize the 'quick wins' that the business intends to achieve.

Velocity is a key aspect of modernization, and plays a vital role in ensuring that the direction that a business takes towards its ultimate vision is in tandem with speed. Multiple studies underline the alarmingly high failure rates of 'rip and replace' IT projects. In that context, it is safer and more economical to reuse tried and tested, unique, business-critical core applications and repeatedly enhanced data.



Onboarding the modernization journey

It is critical to determine the best modernization technique for specific situations based on the existing environment, business needs, and individual application. An individual organization is more likely to need various modernization techniques to use throughout enterprise. The Micro Focus Modernization Maturity Model is a framework designed to help with planning, and Zensar's proprietary Application Transformation Framework helps with the execution of modernization programs. By reviewing modernization plans through the lenses of infrastructure, application, development processes, management, and culture, this model enables organizations to build a holistic view of their modernization plans. Zensar's end-to-end transformation strategy which includes **Discover, Assess, Plan, Pilot, Migrate, and Realize** helps organizations to execute their modernization plans.



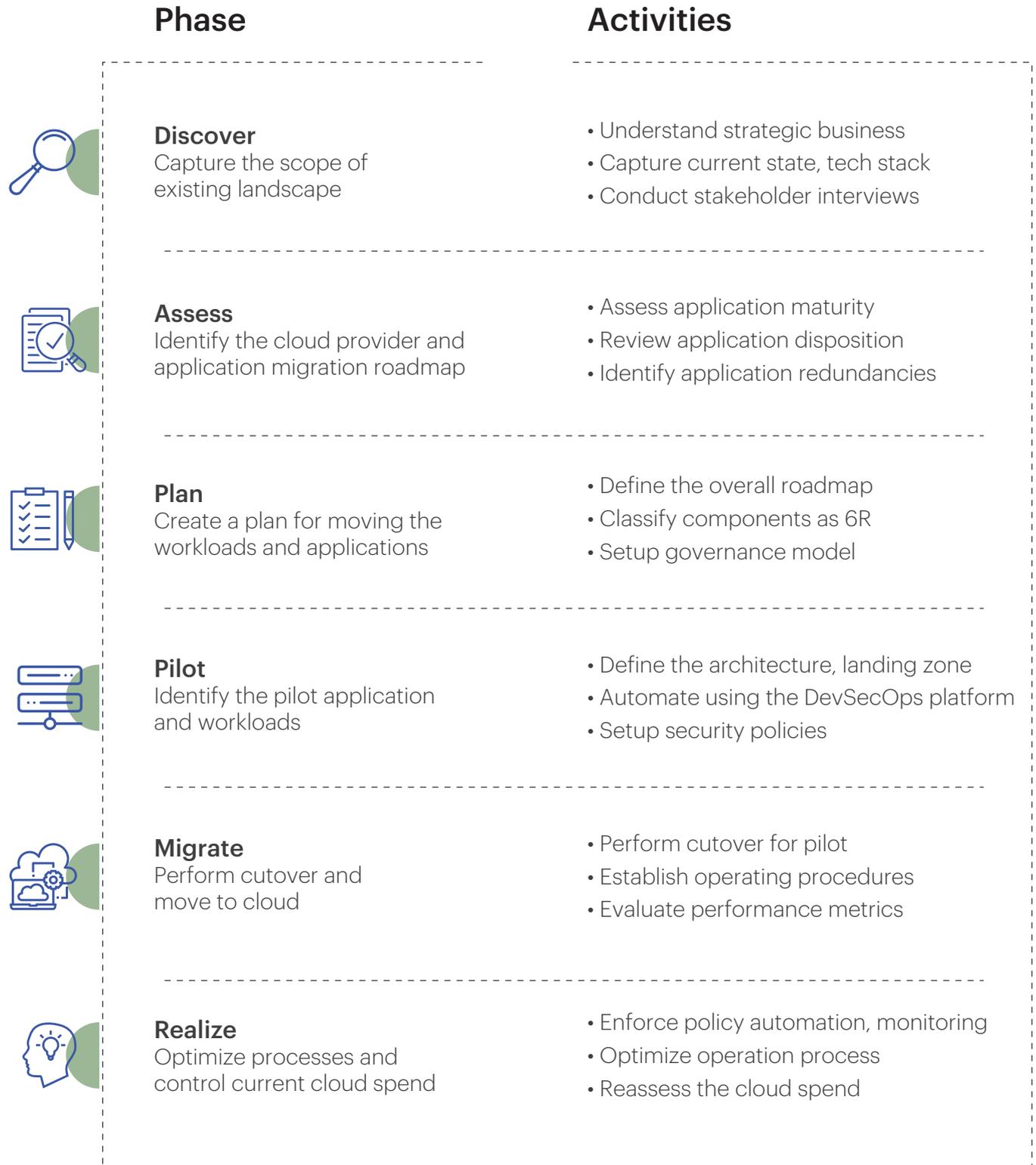


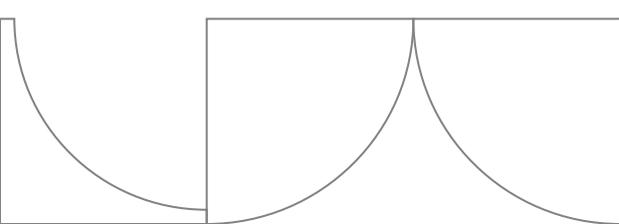
Figure 3: The six phases of Zensar’s end-to-end transformation strategy

Lens/Stage	1	2	3	4	5
Infrastructure	Mainframe	Distributed	Cloud		
			Cloud-ready	Cloud-optimized	Cloud-native
Application	Monolithic Proprietary ACID transactions	N-tier Portable Virtualized	Loosely-coupled Relational 'Macro' Container	Components API Services Containers	Microservices NoSQL BASE transactions
IT Process	Waterfall	Iterative	Agile	DevOps	DevSecOps
Management	Linear	Managed	Defined	Measured	Optimized
Culture	Departmental	Directed	Collaborative	Trusted	Performance

Tabel 1. Micro Focus Modernization Maturity Model Lenses and Stages provide a framework for planning

It is not necessary to bring all elements to level 5 of the Modernization Maturity Model when an organization is on a modernization journey. Each element must be modernized to deliver value at the least risk and cost. The combined strength of Zensar and Micro Focus has helped businesses plan and execute modernization in keeping with their individual readiness and business requirements to deliver the right value.

Please reach out to us if you would like to achieve application modernization and transformation of your legacy mainframe applications and receive a detailed practical guide on Monolith to Microservices.



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We conceptualize, build, and manage digital products through experience design, data engineering, and advanced analytics for over 130 leading companies. Our solutions leverage industry-leading platforms to help our clients be competitive, agile, and disruptive while moving with velocity through change and opportunity.

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