

DIR Technology Forum 2017

October 17th

Application Modernization to Cloud

New Life for Legacy IT Systems

APPROACH TO APPLICATION MODERNIZATION AND CLOUD ENABLEMENT



➤ Modernize by **building on the functionality embedded in your core systems** that run the heart of your business.

➤ An incremental approach can **reduce risk and maximize your investment by focusing effort on system improvements** rather than trying to reinvent what is already working.

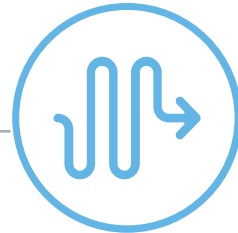


STANDING STILL IS NOT AN OPTION

Many organizations across industries struggle with modifying their core systems to support business demands, handling maintenance requests, and updating aging applications.



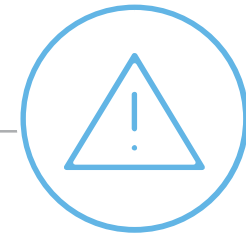
COSTS



AGILITY



EFFICIENCY



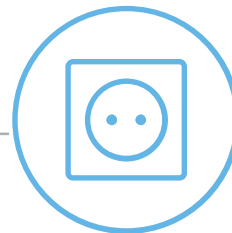
RISK



**MAINFRAME
BRAIN DRAIN**



REPORTING



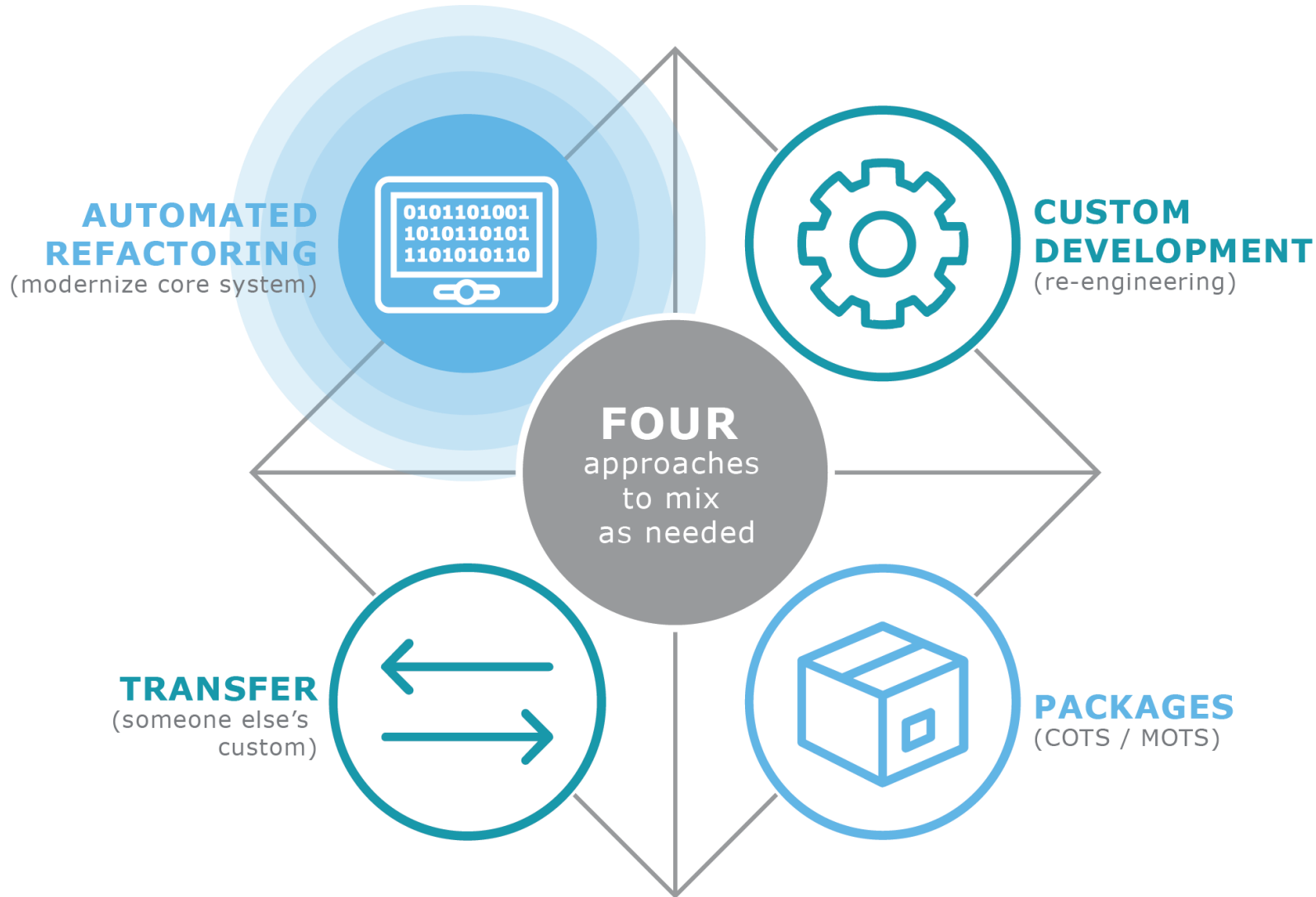
INTEROPERABILITY



SECURITY



APPROACHES FOR MODERNIZING YOUR APPLICATIONS



FOUNDATIONAL PROJECT ACTIVITIES

IT Governance

Application Lifecycle Management (ALM)

Analytics and Reporting

Cybersecurity

Project Management and Testing

Maintenance and Operations

DRIVERS TO MODERNIZE TO CLOUD



Cost Efficiency

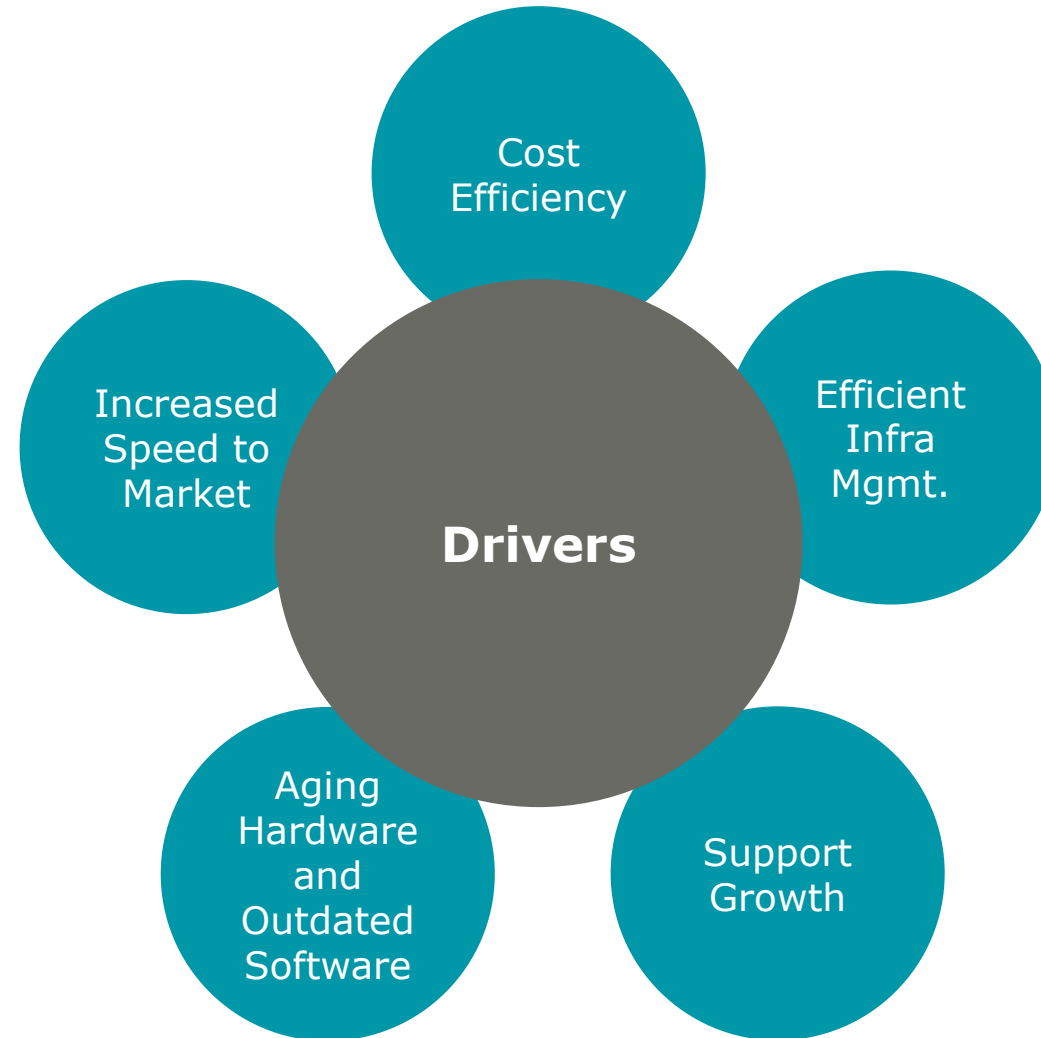
- Lower capital expenditure
- Pay for what you use
- Repair & maintenance savings
- Software and license purchase savings
- Physical space savings

Increased Speed to Market

- Highly automated-easy/fast deploy
- Ability to combine & create customized services instantly
- Scalable services and applications

Aging Hardware and Outdated Software

- Legacy assets that are prohibiting agencies to add and extend the features



Efficient Infrastructure Mgmt.

- Cloud computing virtualization technology can increase the utilization percentage of resources owing to time sharing
- Collaborating/sharing made easier between disparate offices, remote workers, and suppliers
- Reduces companies consumption of energy and need for multiple data centers

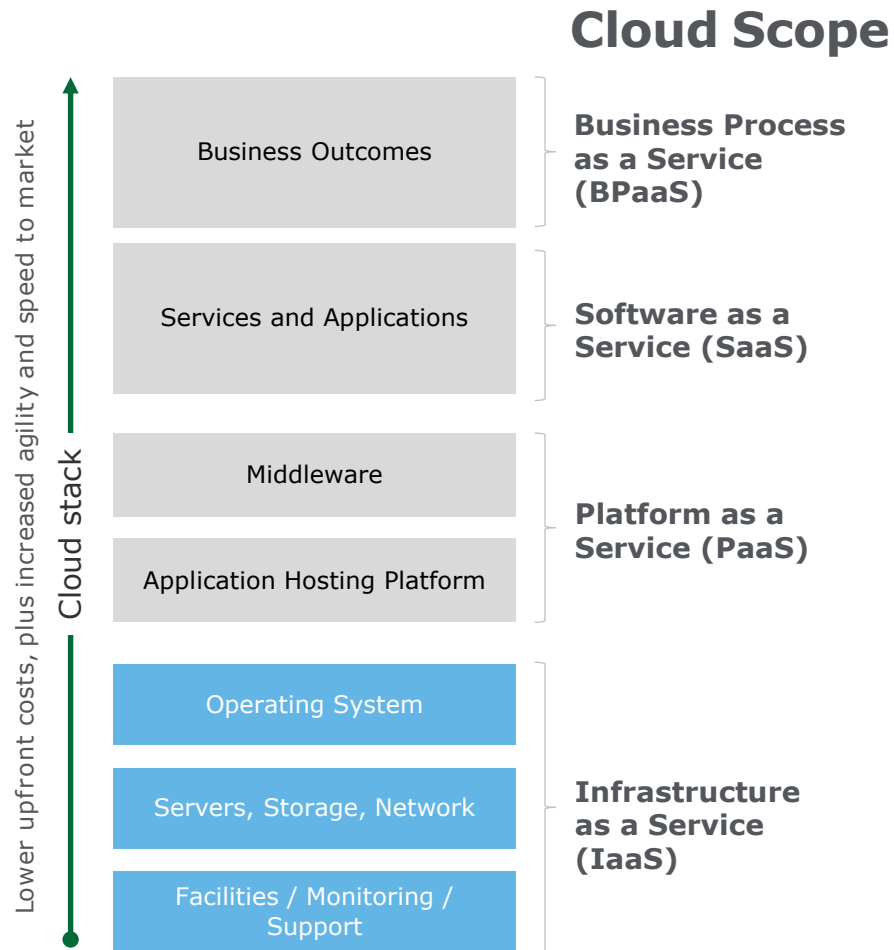
Support Growth

- High fluctuation or unknown of demand, requiring ability to scale quickly



CLOUD MODEL

The cloud model covers four levels of scope and three delivery models



Top Cloud IaaS Providers



Cloud Delivery Models

Companies can be all-in on cloud without being 100% cloud, they can mix and match based on needs. In each option, data can be as (or more) secure than it is with on-premise options.



Public



Private



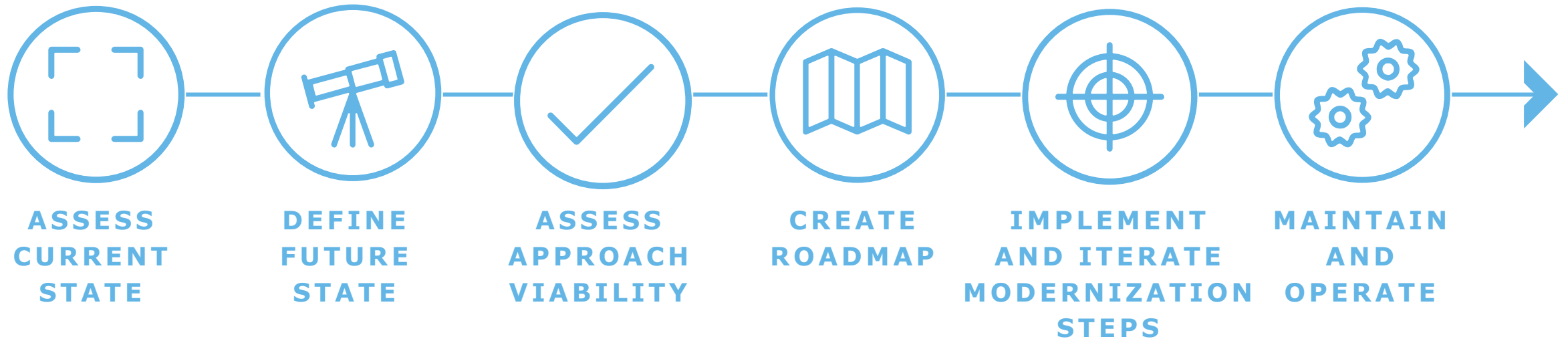
Hybrid

THE PROCESS



APPLICATION MODERNIZATION TO CLOUD LIFECYCLE

Starting with an assessment and detailed analysis of your systems, create a roadmap and set priorities for how modernization can effectively serve your business.





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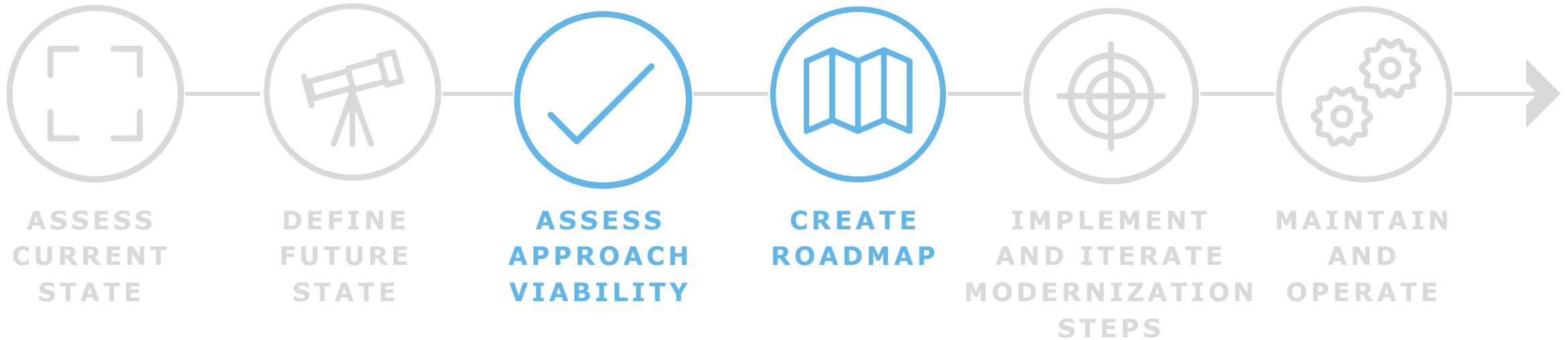


- **CODE DIAGNOSTICS AND ASSESSMENTS**
- **FUTURE STATE ARCHITECTURE AND TECHNOLOGY NEEDS**
- **SECURITY, RISK AND PRIVACY**



APPLICATION MODERNIZATION TO CLOUD LIFECYCLE

Starting with an assessment and detailed analysis of your systems, create a roadmap and set priorities for how modernization can effectively serve your business.



- **CLOUD ECONOMICS**
- **SELECT SUITABLE CLOUD MODEL**
- **DETAILED MIGRATION ROADMAP**



APPLICATION MODERNIZATION TO CLOUD LIFECYCLE

Starting with an assessment and detailed analysis of your systems, create a roadmap and set priorities for how modernization can effectively serve your business.



- **PERFORM AUTOMATED REFACTORING**
- **IMPLEMENT DEVOPS**
- **OPERATE & PERFORM ONGOING BUSINESS MODERNIZATION**



MODERNIZATION USING AUTOMATED REFACTORING

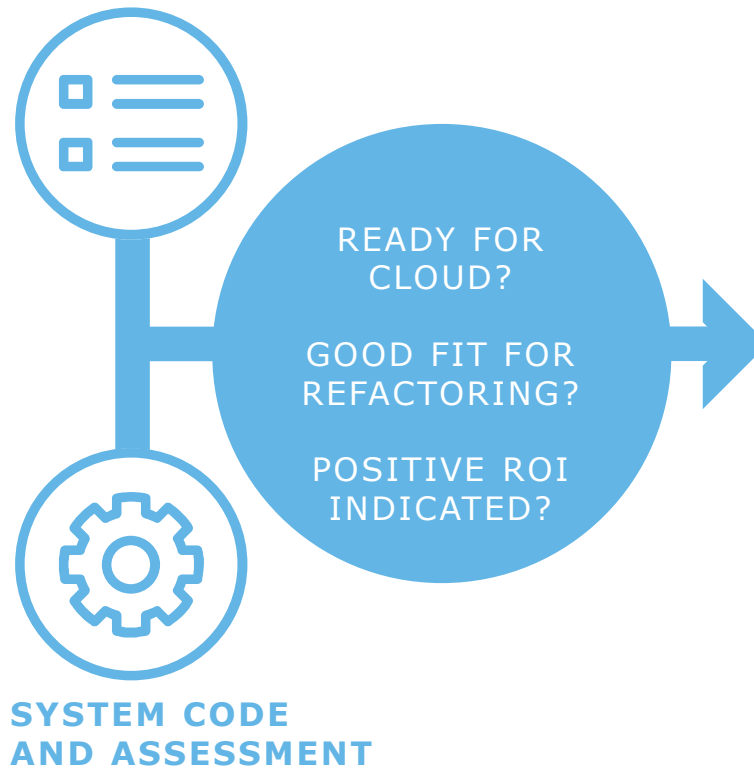
Automated refactoring sets you up for future business improvements and efficient, cost effective operations.

MODERNIZATION ASSESSMENT

AUTOMATED REFACTORING

MODERNIZATION







OUTCOMES








Specialized tools and techniques **refactor**...

-  **USER EXPERIENCE**
-  **CODE**
-  **DATA**

...Enabling the business platform to be **modernized** with changes to...

-  **RULES**
-  **WORKFLOW**
-  **MOBILE**
-  **CLOUD**
-  **SECURITY**
-  **ANALYTICS**

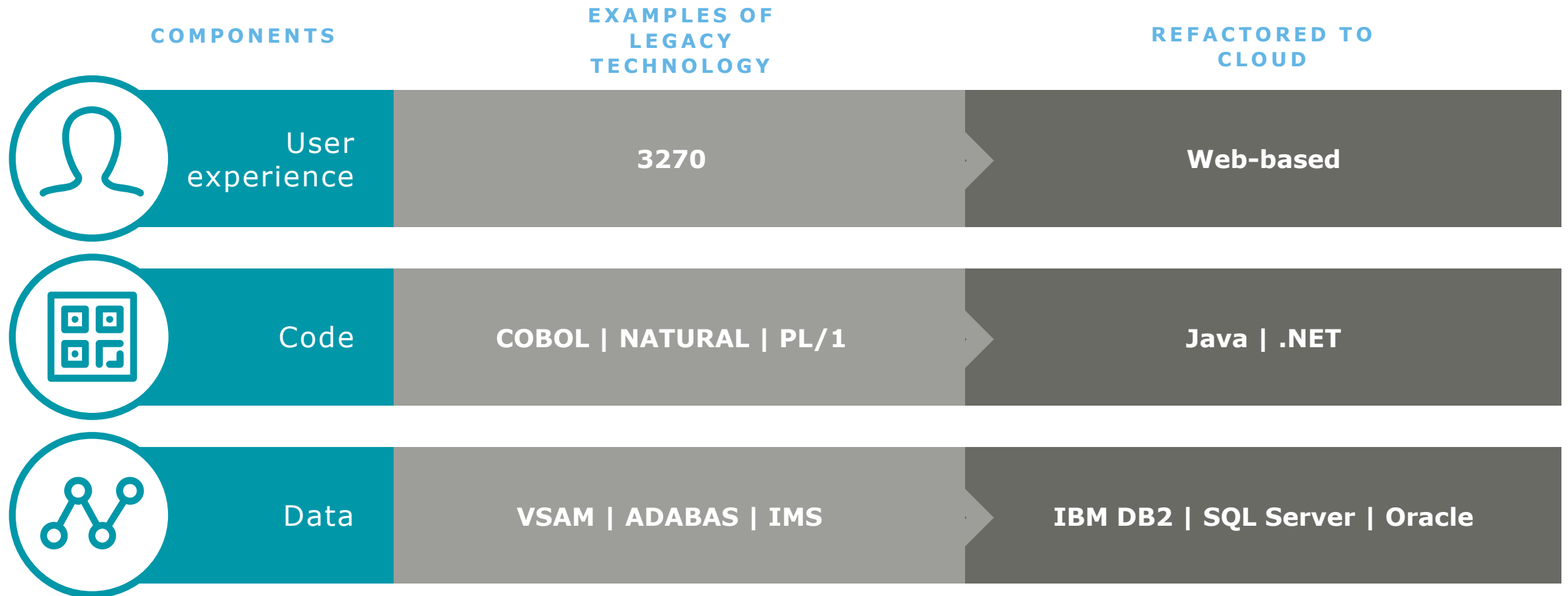
...So organizations can...

-  **SERVE CUSTOMERS**
-  **OPERATE MORE EFFICIENTLY**
-  **STAY COMPETITIVE**
-  **WIN IN THE MARKET**
-  **MEET NEW LEGISLATIVE STANDARDS**



FULLY AUTOMATED REFACTORIZING

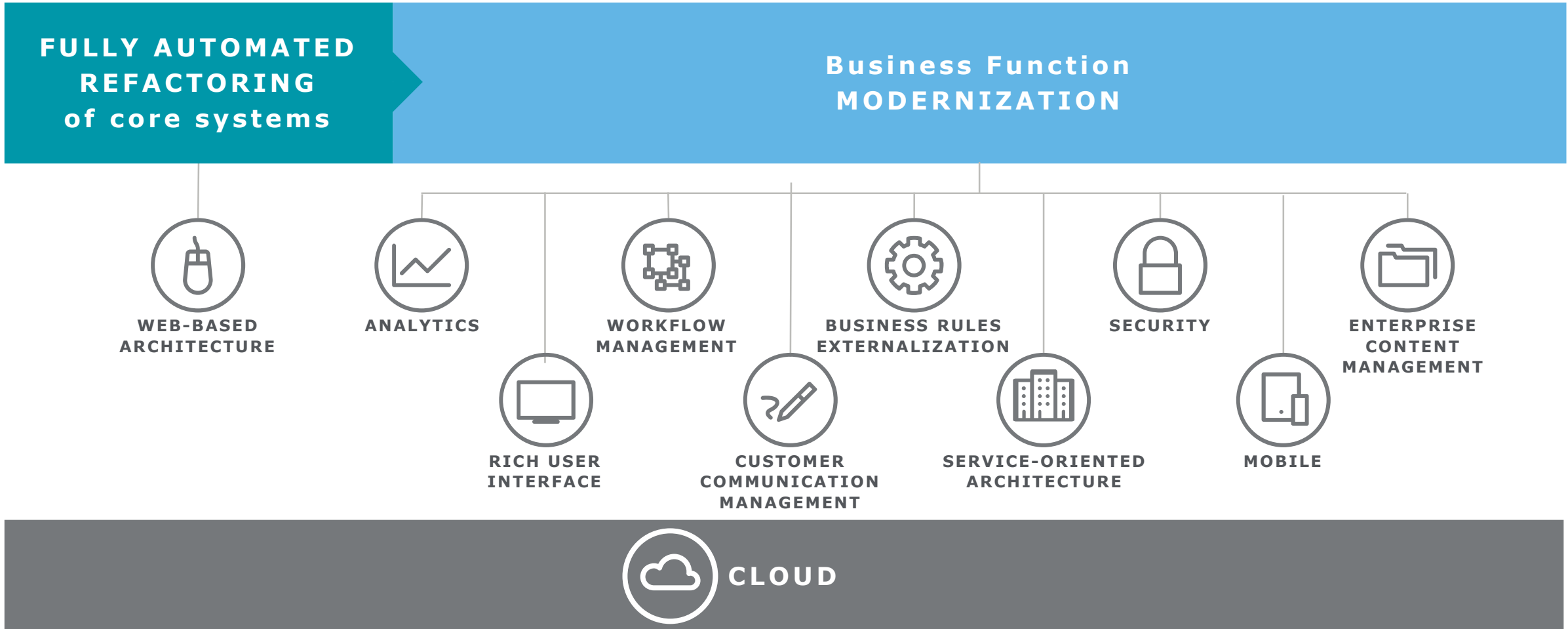
A unique approach to migrate legacy technologies to cloud, saving time and reducing errors.





THE ROAD TO BUSINESS MODERNIZATION

Once refactoring of your core systems is complete and deployed to cloud, we open the door to modernizing business functions and driving innovation into other components of your systems.



APPLICATION MODERNIZATION IN ACTION: TEXAS DEPARTMENT OF MOTOR VEHICLES



Impact



FASTER IMPLEMENTATION

The system's 700 screens, 3,000 code modules, and 120 ADABAS files were refactored in two years.



IT STAFF SKILL TRANSITION

Existing IT staff trained on tools to maintain the new Java platform and started using Application Lifecycle Management (ALM) tools.



SYSTEM UPDATES CONTINUED

Developers continued to make updates to the legacy code during the automated refactoring project.



MINIMAL END USER TRAINING

Training requirements were minimal for the new system since the refactored system mimics the mainframe system functionality.



SYSTEM MAINTENANCE SAVINGS

Hardware & software savings year on year.



MODERN REPORTS

Business users gained the ability to develop and filter structured reports specific to the report user in a modern graphical format.

Application Modernization pilot ready for system test in 6 weeks, production deployment in 6 months

APPLICATION MODERNIZATION IN ACTION: LARGE RETAIL CLIENT



ISSUE

The organization's core systems rely on legacy mainframe cobol based applications limiting their ability to respond to market demand and resulting in higher infrastructure costs



SOLUTION

Automated refactoring of the legacy application to a Java based modern architecture running on the Google Cloud Platform (GCP)



IMPACT

Applications on the newer platform allow for rapid changes to meet market demand. The organization now has the ability to meet seasonal consumer demand by utilizing dynamic scaling on cloud

Application Modernization to the cloud accomplished in 18 months

APPLICATION MODERNIZATION TO THE CLOUD SUMMARY



**PROVIDES A CLEAR PATH TO THE
CLOUD USING AUTOMATED
REFACTORING**



LOW RISK APPROACH



**ENABLES FUTURE BUSINESS
MODERNIZATION**



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