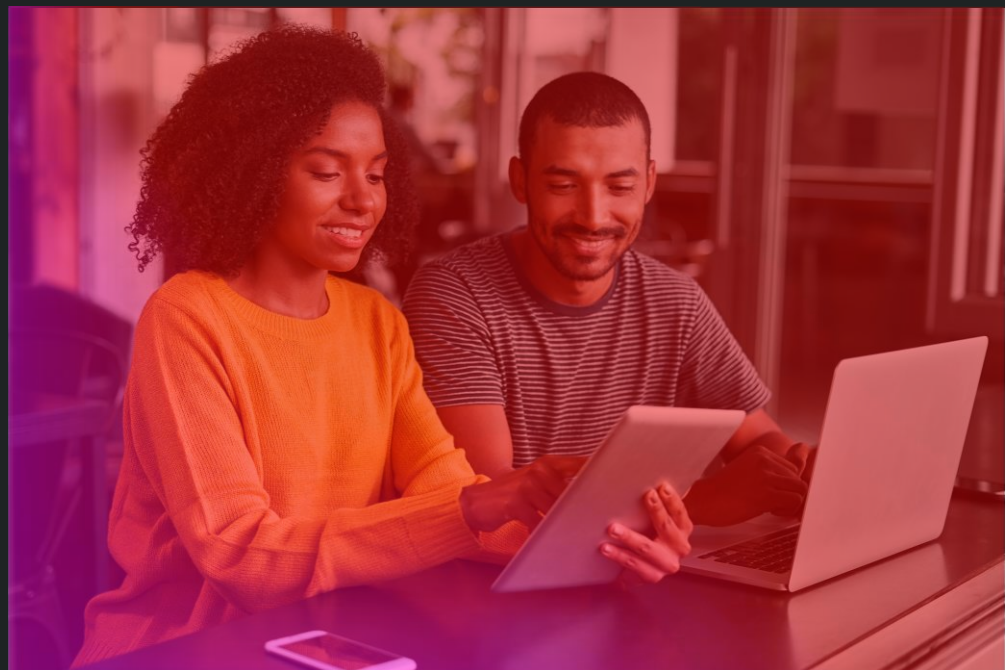
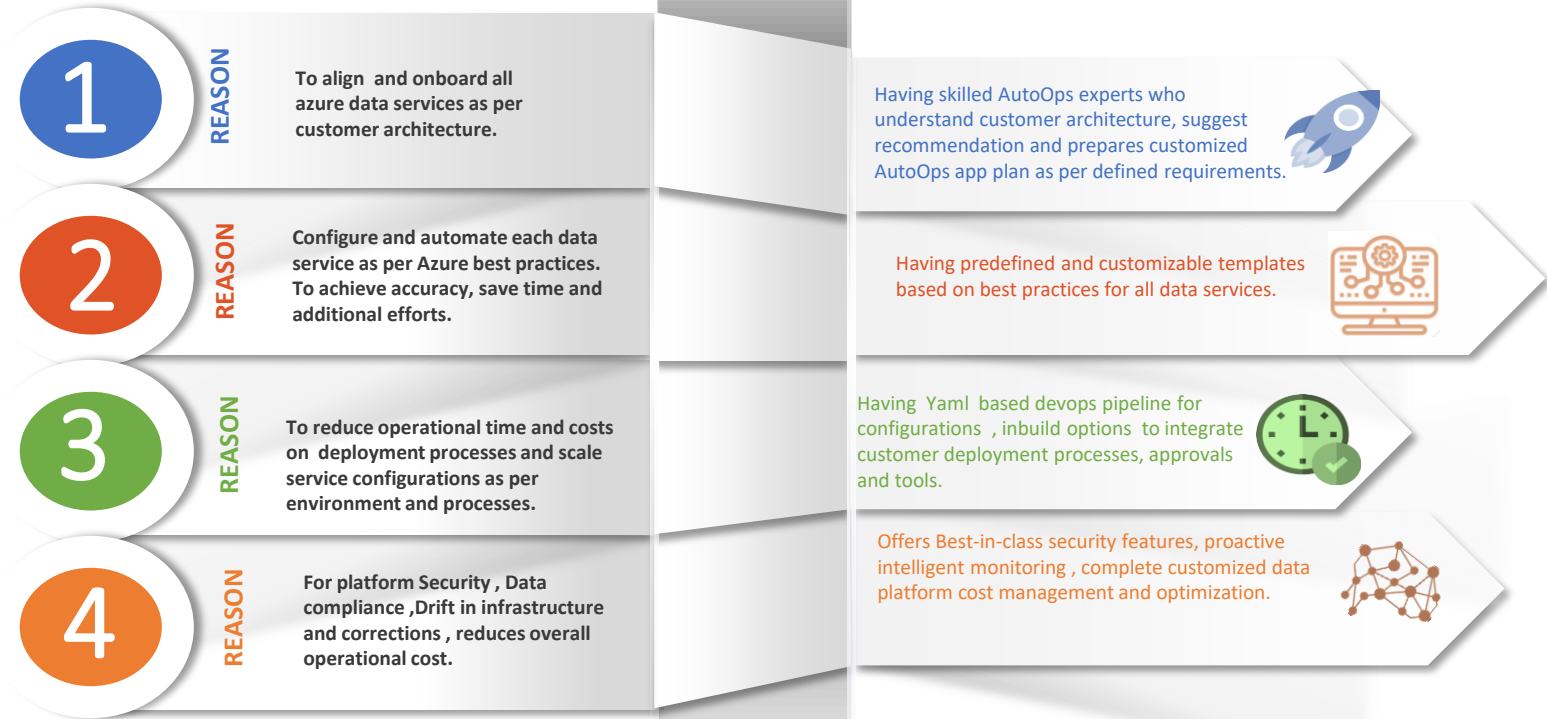


# Azure AutoOps

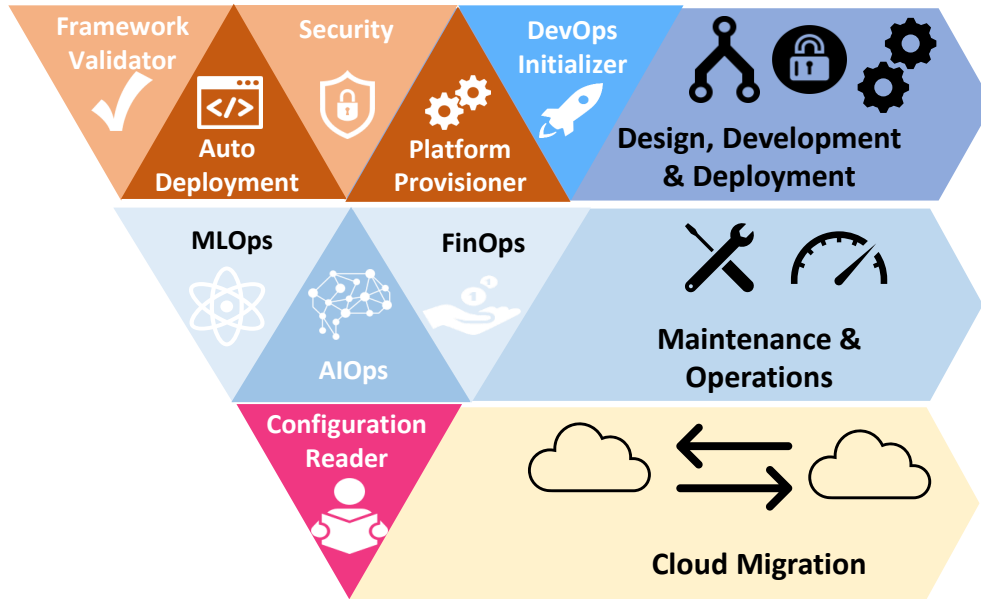


# What and Why Customers need Azure AutoOps ?How?



# Azure AutoOps – One Stop Data Platform Solution across SDLC

AutoOps is a one-stop, data platform automation solution, based on XOps disciplines that help in development, deployment and maintenance of data platform requirements and processes, through seamless automation and intelligence.



## Business Agility and Automation

Faster Development & Reliability



## Intelligent Operations

for Cost, Maintenance and Model Management



## Security

Data Encryption, Masking, RBAC and more...



## Reusability & Reproducibility

Faster Migration across Clouds

# Azure AutoOps Detailed View

To Configure ,Build, Test , Deploy ,Monitor and Manage Azure Data Services which gives a unified view of Data , Infrastructure, Network and Operation for all data services across the environment to all data stake holders.

## DevOps Initializer

- Auto configures..
- DevOps Project Development methodology
- Repos
- Branches
- Project and Object Level permissions
- DevOps Starter Kit

## Platform Provisioner

- Excel based templates & Python based scripts to conceive app plan.
- End to end automated platform with security configs, platform validator

## Security

- Auto security configurations which include:
1. Data encryption
  2. Data masking
  3. Object Level Security
  4. Auditing
  5. RBAC

## Auto Deployment

- Leverage dedicated CI/CD pipelines for infra deployment with change management tools
- Dashboards to aggregate & display pipeline status

## Framework Validator

- Test & validate provisioned data services
- Auto capturing test evidences
- In-built integration with ITSM tools & Synergistic dashboards

## AIOps

- Responsible for:
- Anomaly detection and resolving alerts
  - Monitoring and alerts
  - Performance visualization of dynamic services
  - Knowledge management

## FinOps

- Single view for platform cost.
- Customized cost optimization recommendation
- Inline option to optimize cost based on recommendations.

## Configuration Reader

- Selenium framework to read existing configs & prepare app plan.
- Create scripts & modules from auto-populated templates against previous configurations.



**Zero to Minimal**  
Operations efforts



**End to End automated**  
data development life cycle



**From Days to Hours**  
Speed and consistency



**Environment Agnostic**  
Highly reusable & customizable

## 01 Project

- ✓ Customized and configurable template for DevOps Project creation.
- ✓ Auto configure development methodology (Agile, Scrum)

## 03 Branches

- ✓ Define branching strategy as per best practices.
- ✓ Auto create required branches with given repo
- ✓ Example- Master, HotFix, Development, Release , Features etc.

## 05 DevOps Starter Kit

- ✓ Self-Explanatory customized user guide
  - Cloning of repositories
  - Sample Git commands like pull, push, merge branches or repos.



## 02 Repositories

- ✓ Auto configure Repos inside Project based on business functions.
- ✓ Example- PlatformSetup , DataOps, TestFunction etc

## 04 Permissions & Role

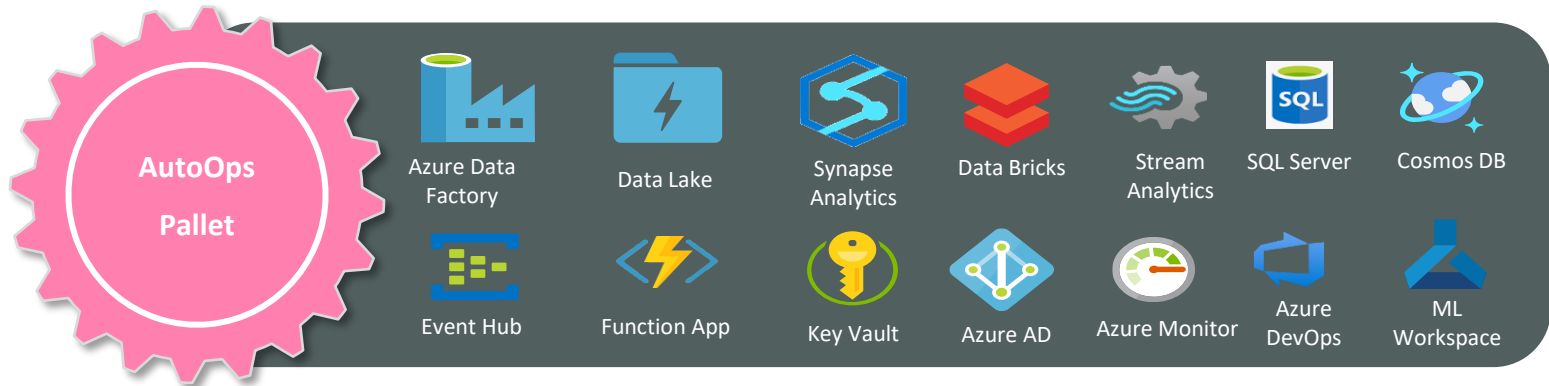
- ✓ Autoconfigure project level permissions.
- ✓ Auto Configure Object Level permissions.
- ✓ Provision for Role Management  
Example- ReleaseAdmin, TestManager , Administrator etc

## AutoOps App Plan

- ✓ Customized excel templates based on customer architecture and data services.
- ✓ Predefined default values with inline comments and sample data.
- ✓ Python based utility to convert excel workbook in deployable templates.

## Automation for Everything

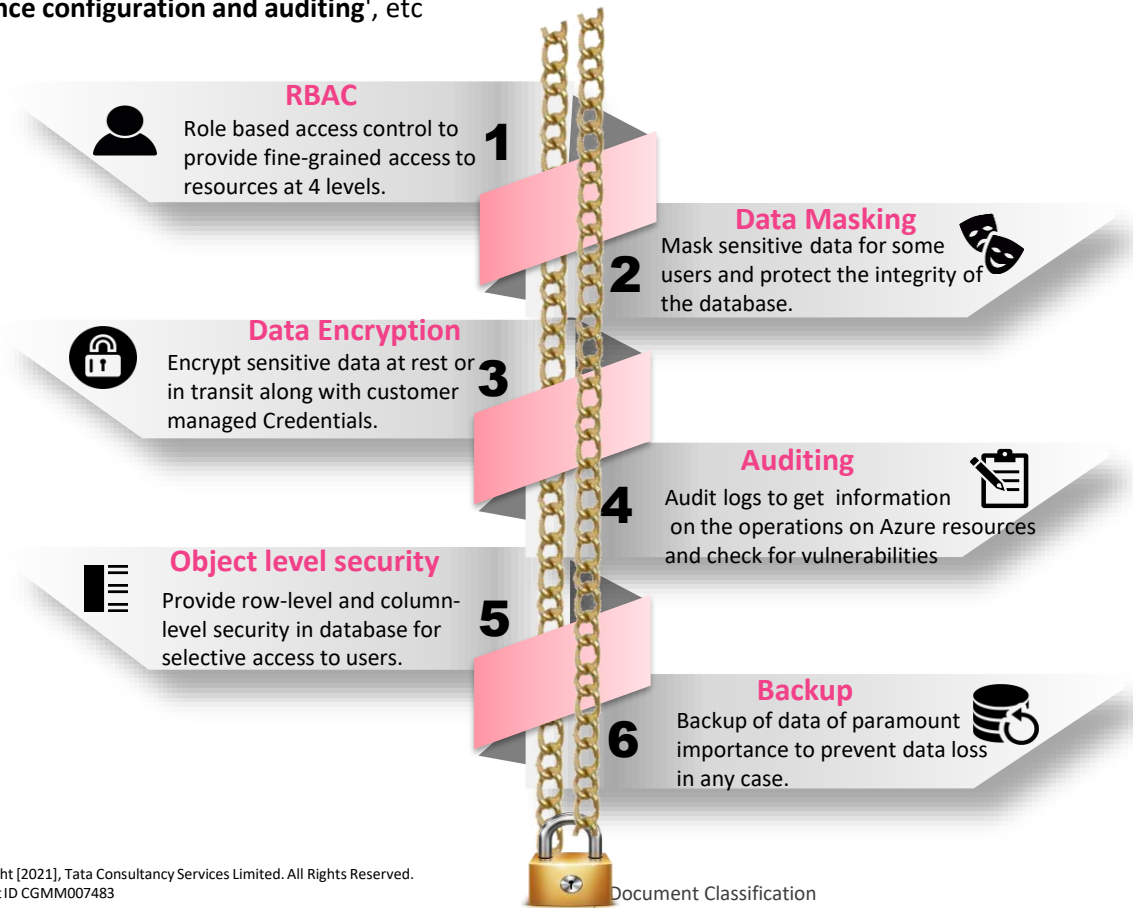
- ✓ End to end automation via terraform, ARM templates or YAML based scripts.
- ✓ Options to include security, monitoring, back up, recovery, etc configurations while provisioning.
- ✓ Automated integration with platform validation framework.
- ✓ Seamless deployment pipelines via Azure DevOps.



# Security

[Design, Development & Deployment]

Best-in-class security features for complete data protection such as 'All data encrypted by default', 'Restricted data access using RBAC', 'Comprehensive compliance configuration and auditing', etc



# Auto Deployment

[Design, Development & Deployment]

## Continuous Integration

- ✓ Configurable and dedicated CI pipelines for Data Services provisioning and DataOps Pipelines .
- ✓ Integration options with tools for code quality, security, scanning etc

## Continuous Deployment

- ✓ Dedicated deployment pipelines for both IaC and DataOps.
- ✓ Auto deployment of modules with scale based on environments.

## Process Integration

- ✓ Options to integrate deployment workflow , organization change management process & tools e.g.JIRA, Service now etc.
- ✓ Configurable notification and approval gates for deployments status.

## Dashboard

- ✓ User-friendly dashboard for end-to-end view of pipelines and deployment metrics .
- ✓ Matrices with details like-successful runs, number of failures , test etc.



# Framework Validator

[Design, Development & Deployment]

Highly customizable and configurable test and validation framework to test all provisioned data services through AutoOps.

Predefined configurable  
excel based template  
for testing for  
provisioned data services

Option to integrate this  
framework with Azure  
DevOps CI/CD pipeline.

Feature to capture a  
test evidence as  
screenshots.

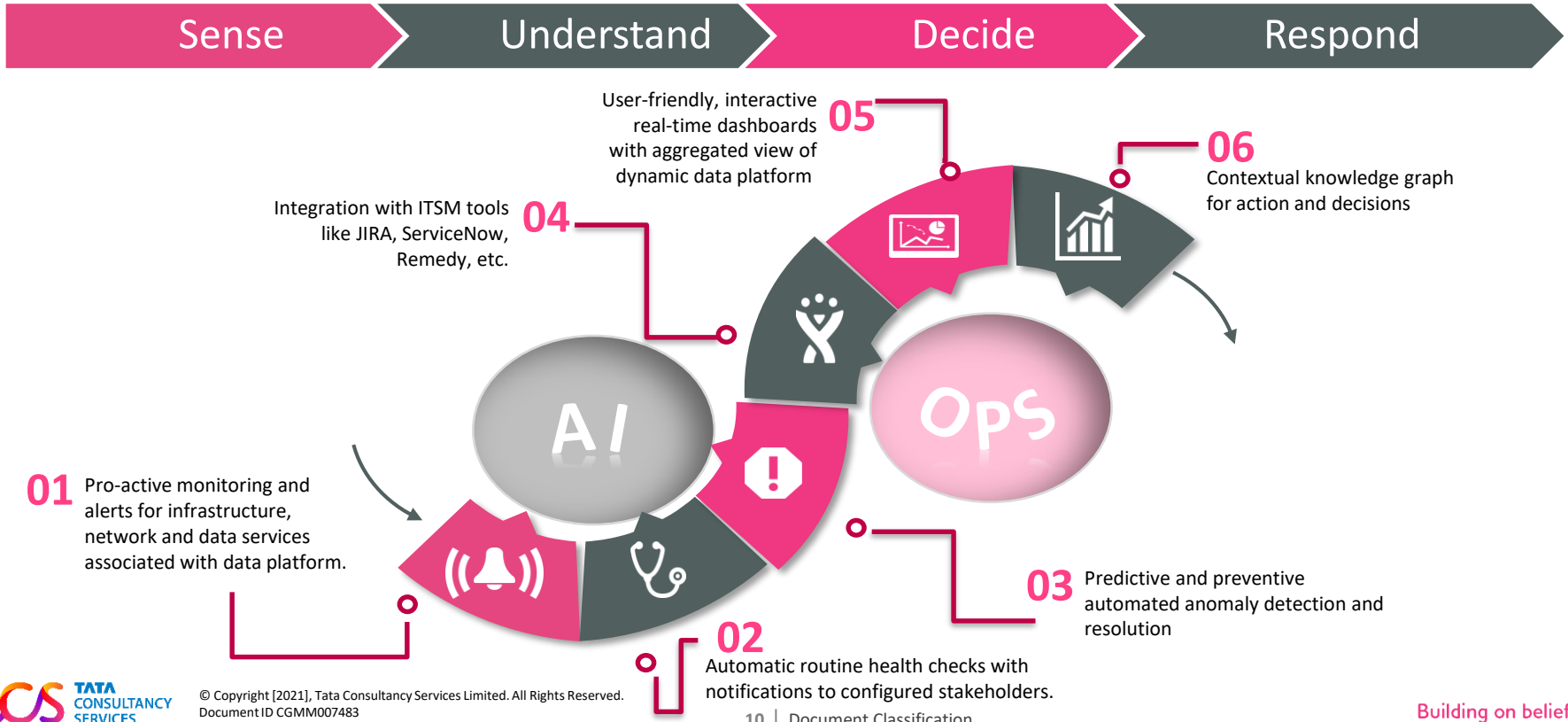
Dashboard with interactive  
and exhaustive information  
about all test scenarios ,  
events, screenshots, tags,  
devices, authors or relevant  
data.

Support to integrate Test  
management tools like  
JIRA-Zypher, Test Rail, etc.

# AIOps

[Maintenance & Operation]

TCS MFDM based next-gen framework for Azure data platform monitoring, routine health checks, anomaly detection and corrections in real-time.



FinOps helps customers make better strategy in terms of efficient utilization and consumption of azure resources. It offers prescriptive model of best practices in cloud finance and enables cross-functional conversation between IT stakeholders and Finance team about where to invest and when.

Resource consumption  
Analysis

Cost-utilization for  
Azure Data Services

Recommendations &  
Cost-Saving measures

## FinOps 3 Phased Approach

### Enlighten

- Current utilization and expenses on resources (current data platform if exist)
- Cost visibility to all data Stakeholders through reports and metrics.
- Forecasting of prices  
Internal team benchmarking.

### Enhance

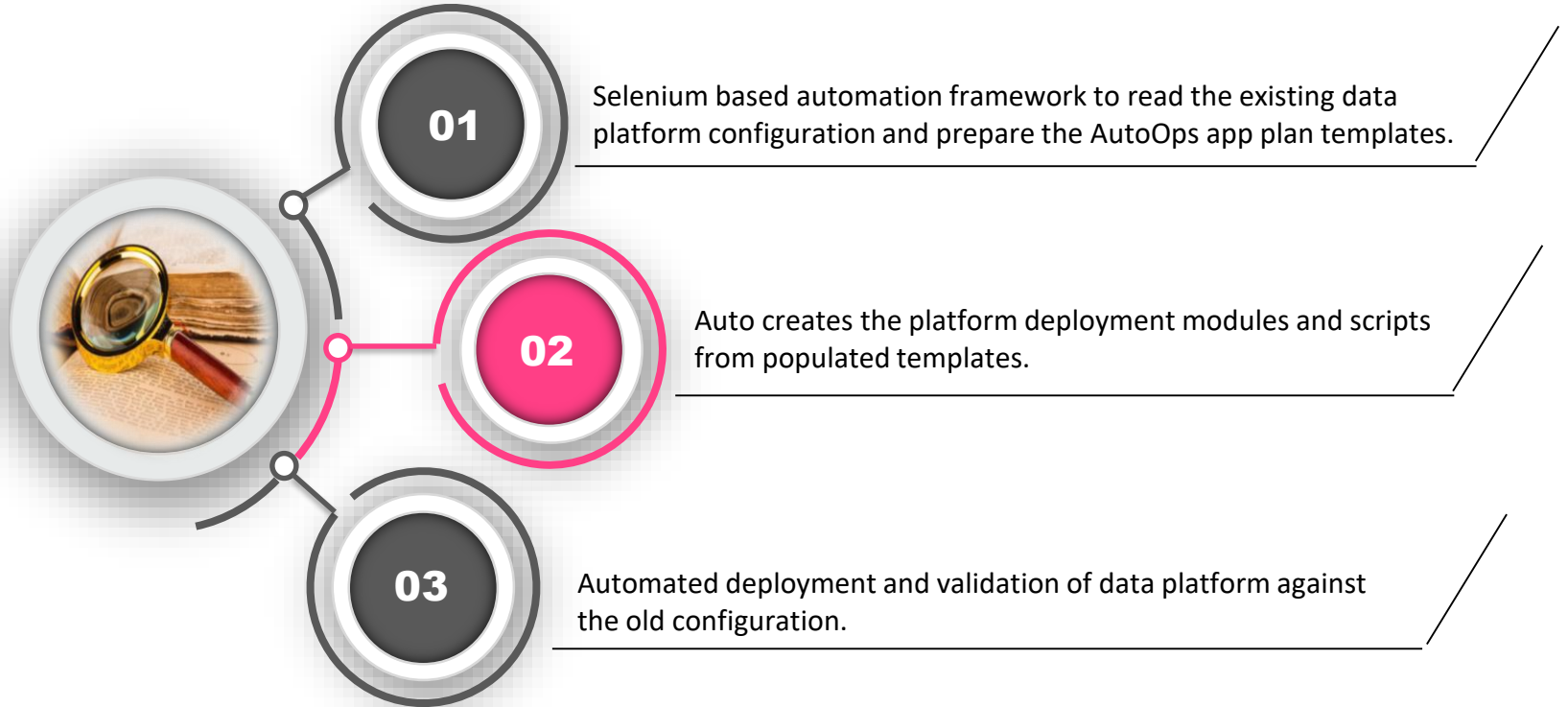
- Centralized buying/ right resource purchase.
- Recommend optimal cost-saving measures.
- Elimination of unused or underutilized resources.
- Comparison of prices.
- Evaluation of practices to meet business objective.

### Execute

- Implement the optimal solutions to reduce cost.
- Customized frameworks and processes.
- Improve efficiency and innovation through automation.
- Defined controls for cloud usage via setting the budgets and alerts.

# Configuration Reader

AutoOps configuration reader helps to auto read platform services configuration and replicate the mirror data platform in another Azure tenant or resource group.



Thank You