

CLOUD AUTOMATION

TT11

Roger Chivers



ROGER CHIVERS



**ROGER
CHIVERS**

Senior Consultant at Instem

Roger is a senior consultant at Instem. Roger began his career at SAS, implementing SAS solutions for globally recognized brands across many industries. After several years in financial services, he brought his expertise to the life sciences industry. He is now focused on helping top pharmaceutical companies take advantage of cloud technologies and implement leading-edge systems

THE PAST, PRESENT AND FUTURE



THE PAST

Private datacenters

All data held internally



THE PRESENT

All organizations on their own journey

Everybody facing their own challenges



THE FUTURE

Hybrid cloud approach

Free choice to select most appropriate host environment

WHAT DO WE MEAN BY CLOUD?



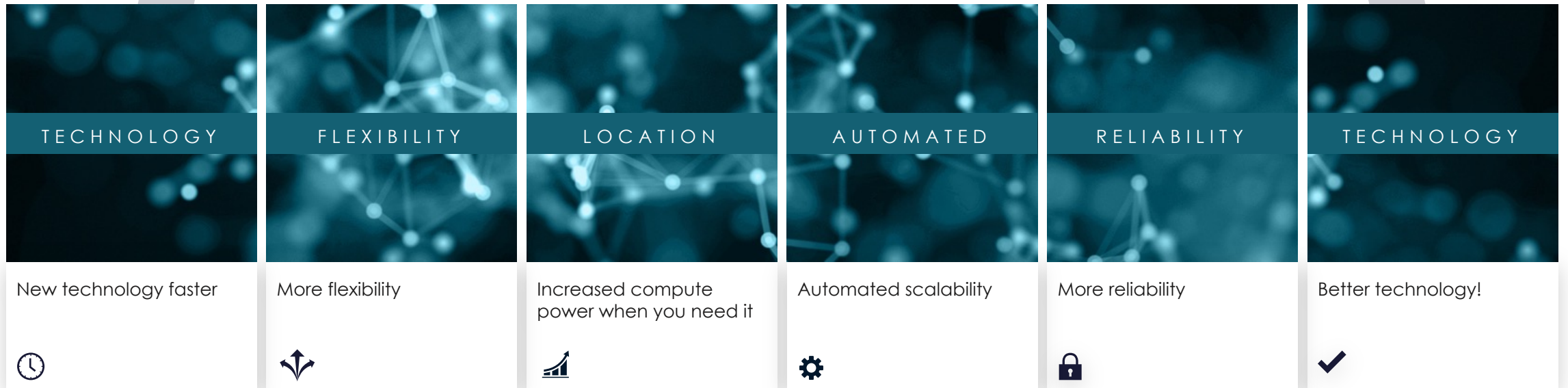
MANY PROVIDERS

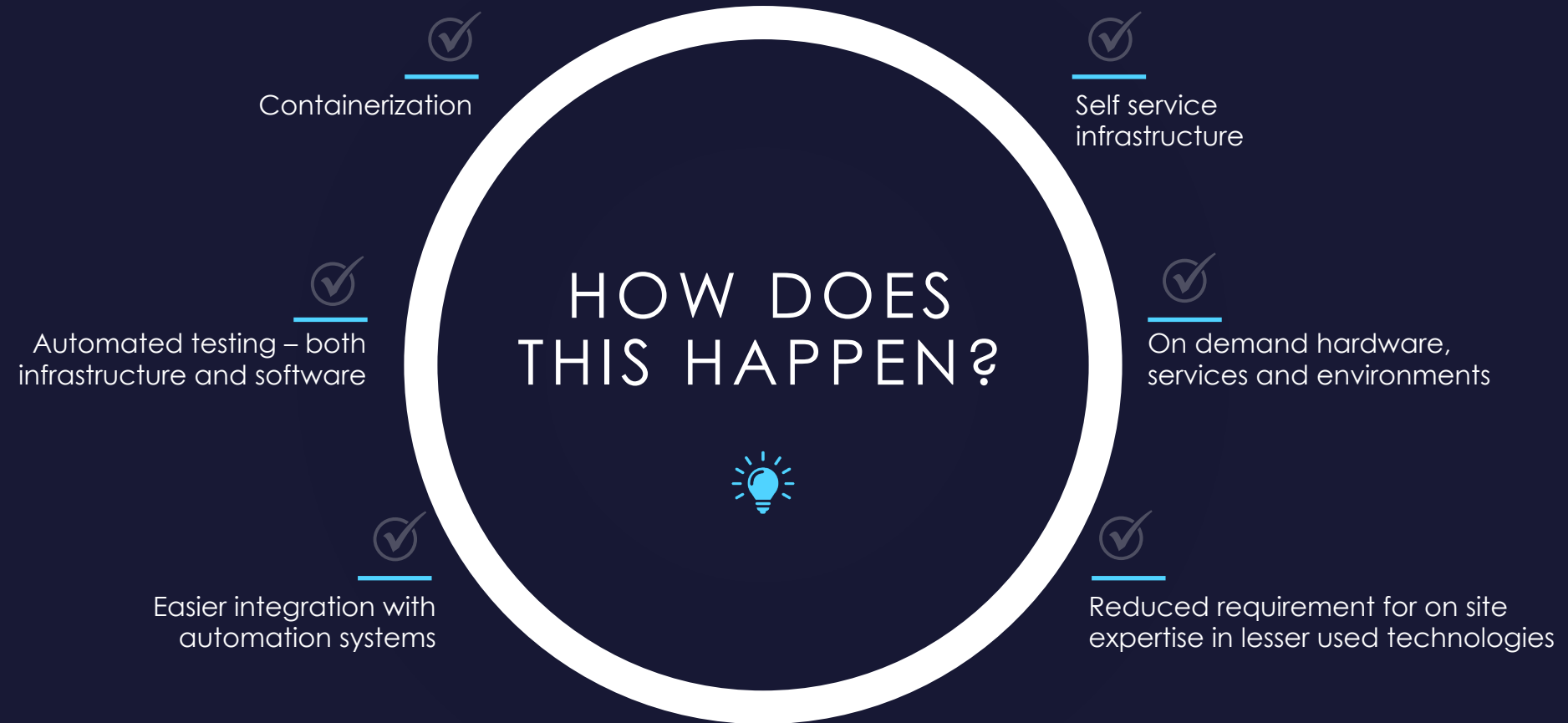
- » Amazon - AWS
- » Google – GCP
- » Microsoft – Azure

MANY FORMS

- » Empty 'datacenter'
- » Services
- » SAAS

WHAT DOES THE CLOUD GIVE US





AUTOMATED INFRASTRUCTURE

```
module "eks" {  
  source = "modules/eks"  
  eks_cluster_name = "development-eks-cluster"  
  eks_vpc = vpc_id  
  availability_zone = "us-east-1"  
  workernode_scaling_desired_size = "1"  
  workernode_scaling_max_size = "1"  
  workernode_scaling_min_size = "1"  
  eks_instance_type = "t3.small"  
}
```

GREAT..

- » Version control
- » Reusable components
- » Easier to implement corporate standards
- » Ability to automate testing
- » Objects and environments can be created temporarily and easily

BUT...

- » New scripting languages
- » A learning curve
- » Not as intuitive as the GUI

MODULARIZED INFRASTRUCTURE DEPLOYMENTS

-  Easy to reuse
-  Predefined expected outcomes
-  Corporate standards applied
-  Self service deployments
-  Pre-defined monitoring/operational parameters

AUTOMATED DEPLOYMENTS

GREAT..

- » Configuration managed in code
- » Environments are easily replicable
- » Configuration management is much simpler
- » Reduced error
- » Reduced time requirements for ongoing maintenance

BUT...

- » New SOPs and processes required
- » Initial investment

DISASTER RECOVERY AND HIGH AVAILABILITY

AVAILABILITY	BACKUP	AUTOMATION	HARDWARE	SIMPLER	FOOTPRINT
Cloud services are nearly always supplied as high availability	Many out of the box backup and restore options available	Automation gives assurance of parity of environments	Significantly less idle hardware assigned to DR systems	Simpler architectures with little to no ongoing configuration post deployment	No need for physical footprint in other locations
					

HOW DO WE MAKE THIS HAPPEN?

IT'S ENTIRELY YOUR CHOICE!



Nearly all cloud solutions are hybrids

THERE ARE MANY FACTORS:



What is your appetite for change?



Which SOPs need updating or rewriting?



Which systems are best suited to migrate?



Do you have any cloud presence currently?



Do you have any cloud expertise?

THE POTENTIAL

ENVIRONMENTS	TECHNOLOGY	LOCATION	SECURITY	SUPPLIERS	TECHNOLOGY
Individual work environments	Newer technology available sooner	Location agnostic	Better security	Wider choice of suppliers	Better technology!
					



**The future transformed for the benefit
of everyone. Intelligent solutions
empower collaboration and
life-enhancing science**



Thank You!

Roger Chivers

Roger.chivers@instem.com