

Festive Tech Calendar 2002



What you need to know about Azure Bicep configurations?

with Elkhan Yusubov

- who loves to help the community and learners how get started, practice and benefit from automation, security and architecture in Microsoft Azure.

T-FREX





Elkhan Yusubov

Speaker | Author
Cloud Architect | Founder



<https://linktr.ee/elyusubov>

Elkhan is a Cloud Architect Manager, Microsoft Azure MVP and 15x MCT with experience in cloud solutions, enterprise healthcare systems and healthcare data, and API standards (HL7 FHIR, EDI X12).

He is an active Microsoft Tech Community Contributor, Cloud Lunch and Learn Speaker and Co-Organizer, and Author with interests in Architecture, DevOps & Security.

He is a frequent speaker at tech meetups and has volunteered for Give Camps, Azure Data Fest, SQL Saturdays and Microsoft community events, like this one.

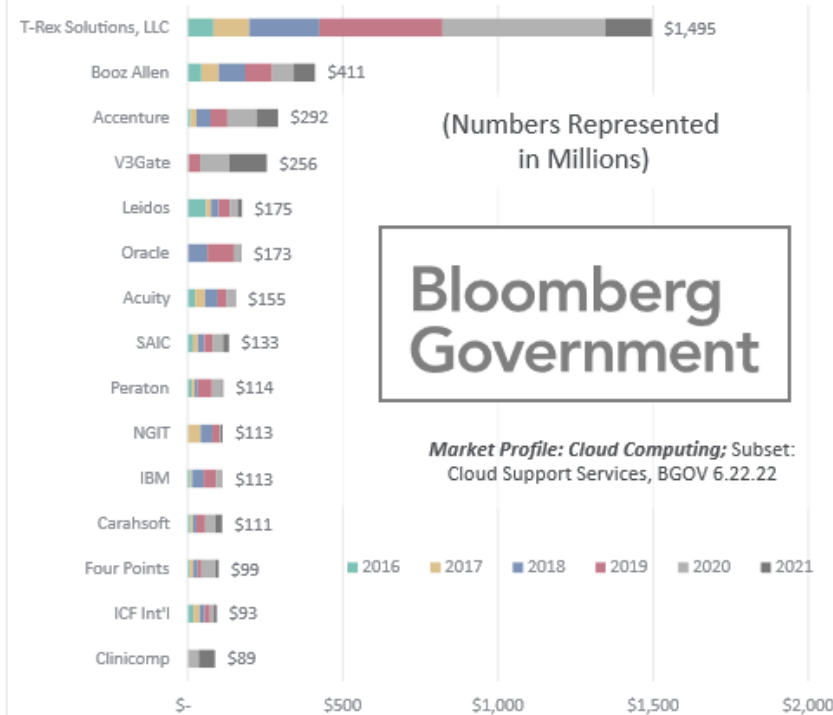
For more, check out his **#cloudmarathoner** LinkedIn posts & blog.

<https://theCloudMarathoner.com> 

What we do; where we do it; how it relates



Top Cloud Support Services Vendors



Company Info

- **Established:** 1999
- **Legal Structure:** LLC
- **Headquarters:** Greenbelt, MD
- **8(a)/HUBZone & SDVOSB Joint Ventures**
- **CMMI-DEV & SVC Level 3 v2.0**
- **ISO 9001; ISO27001; ISO20000**

Prime Vehicles/BPAs:

- GSA MAS HACS SIN
- GSA MAS Cloud SIN
- GSA MAS IT Svcs SIN
- COBRA OTA
- CIO-SP3 Small Business
- STARS III via MPJV
- GSA MAS HACS SB & Cloud SIN SB via MPJV

Silver
Microsoft
Partner

Silver Datacenter
Silver Data Analytics
Silver Data Platform
Silver App Dev
Silver App Integration



T-Rex has donated over \$3.5M in support of underserved youth, veterans, and local organizations.



aws Public Sector



T-Rex's 2020 Census Technical Integration (TI) Program

Census Bureau is one of the first govt agencies to host and protect their mission-critical public-facing applications in the cloud.

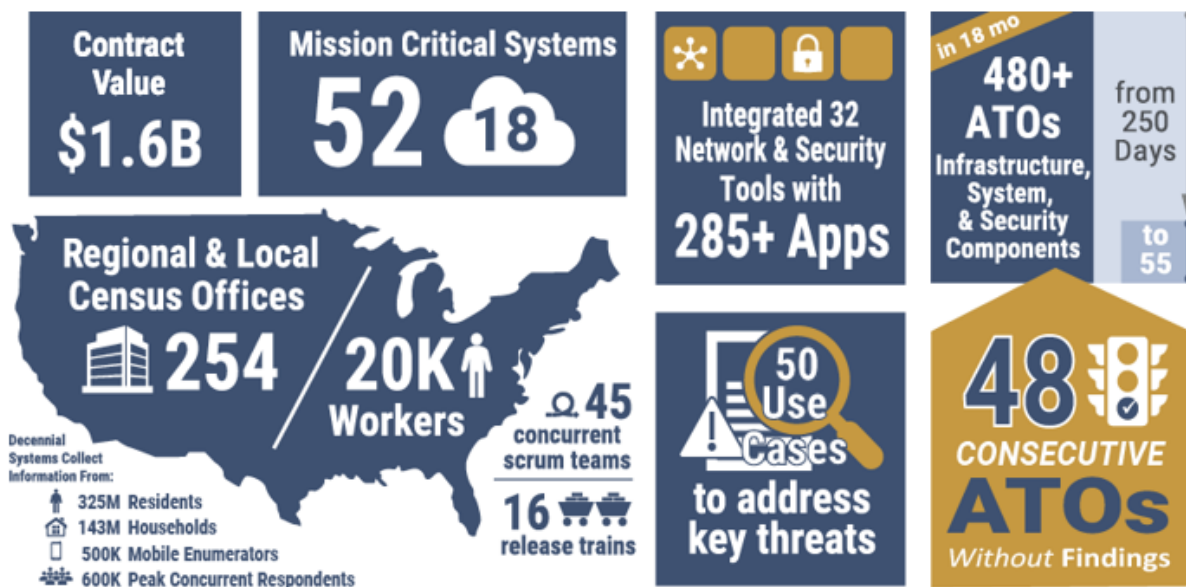
Mission Innovations:

- Improve public access through internet
- Enhance data usage to reduce work
- Boost workforce productivity with mobile computing



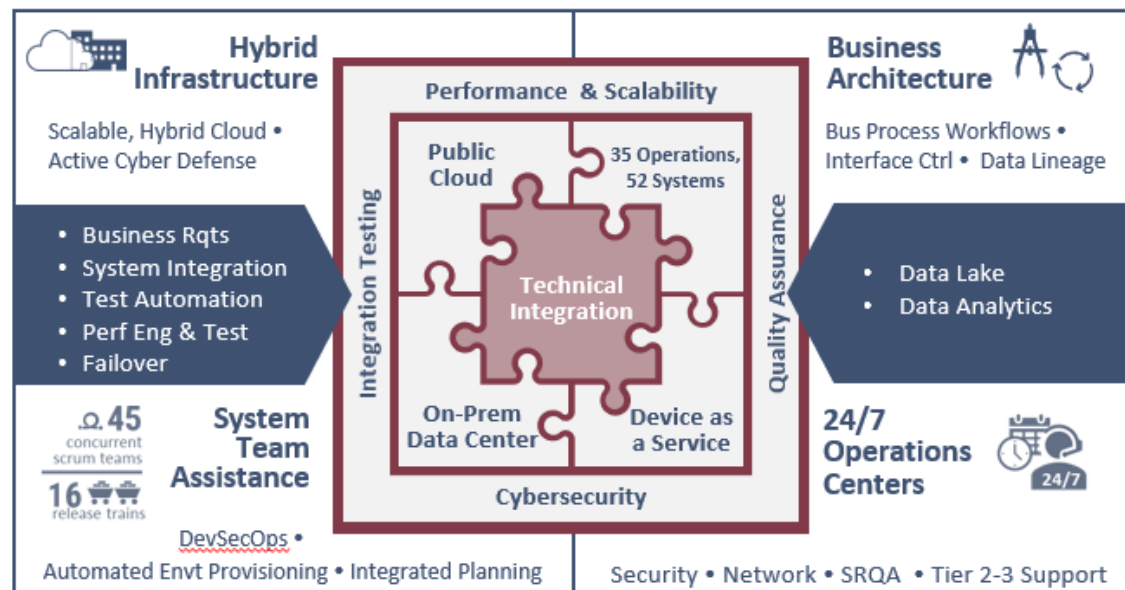
The 2020 Census Technical Integrator (TI) program is one of the largest, most visible government IT transformation programs in size, scale, complexity and scope.

Size, Scale & Complexity



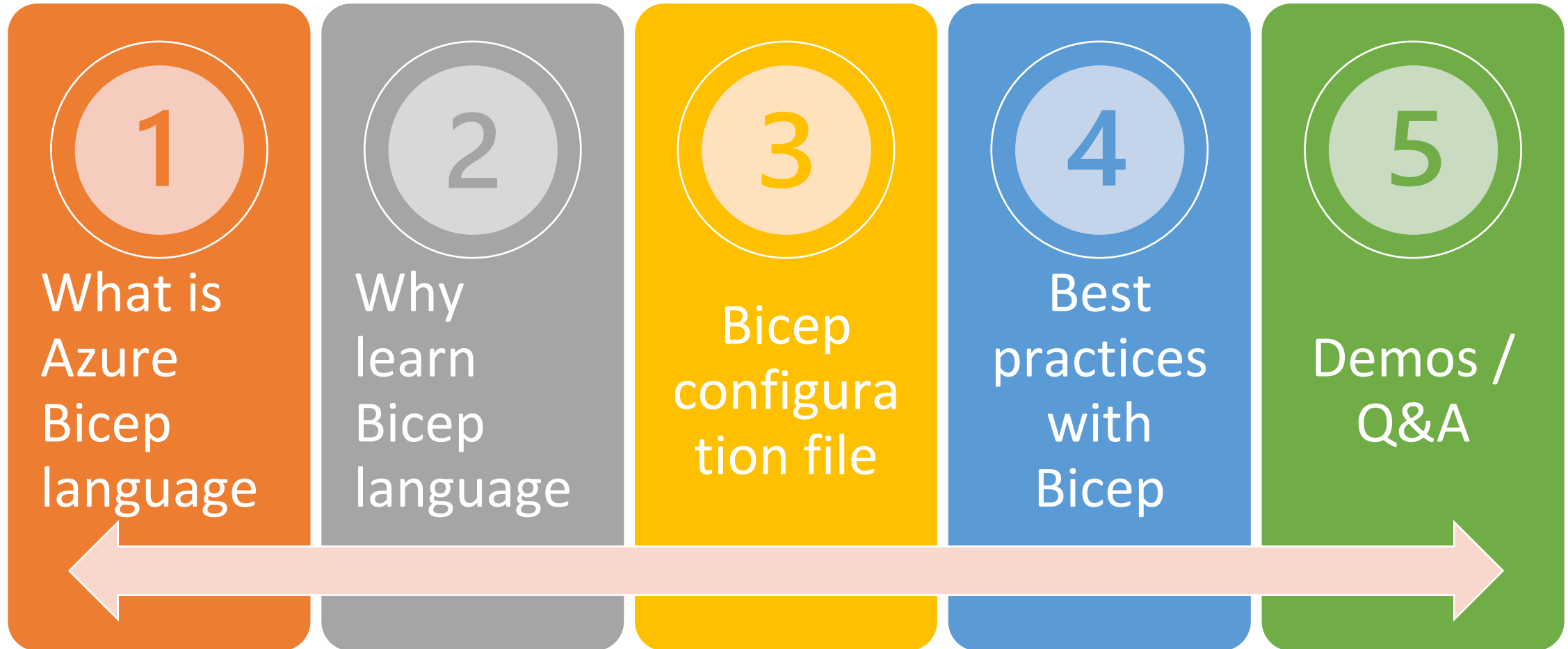
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Scope



IT Modernization encompassing Cloud, Cyber, Data Analytics, & App Development positioning USCB for the future

What we will cover

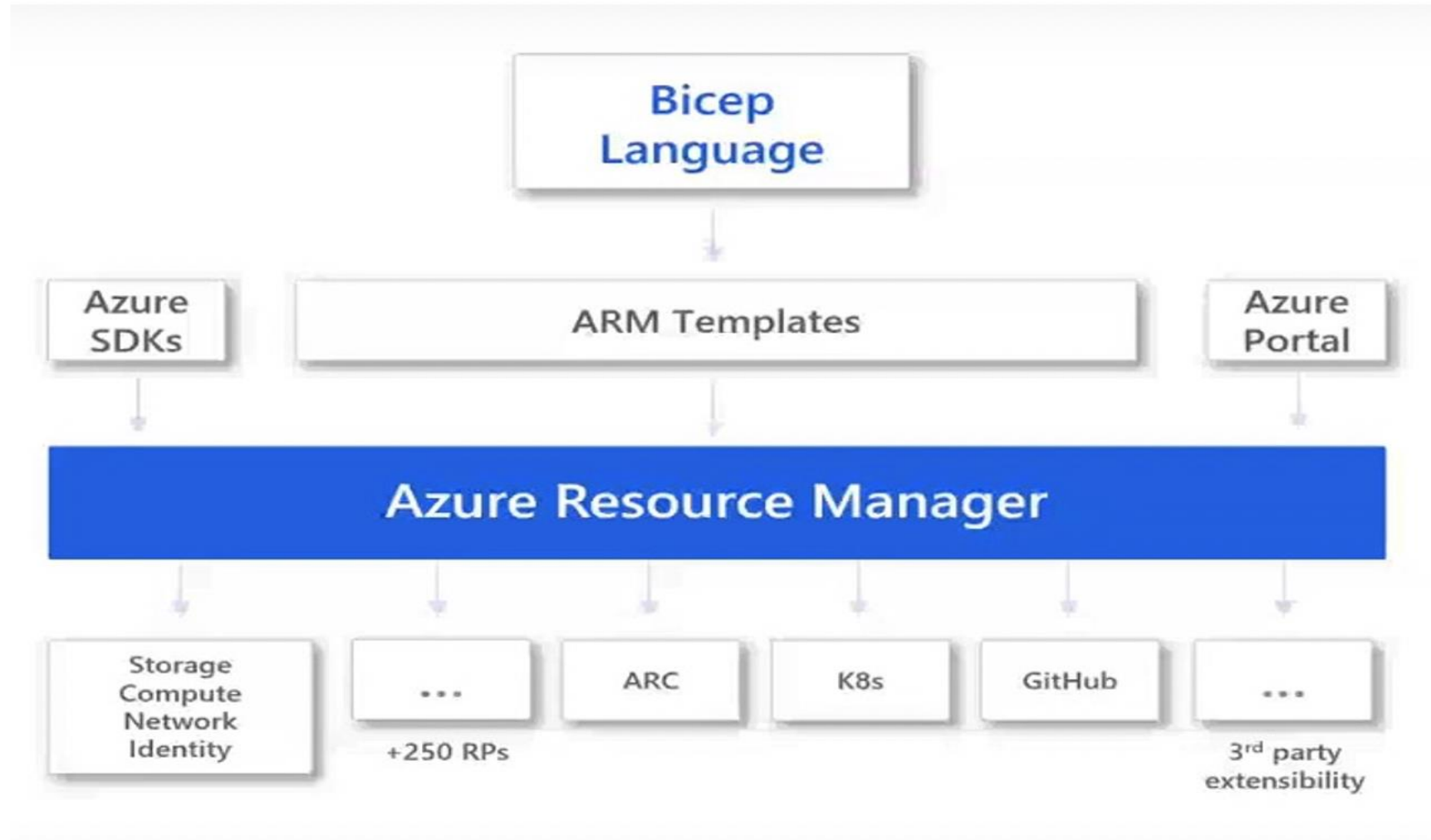


What is Azure Bicep?

- DSL for deploying Azure resources
- Transparent abstraction over ARM and ARM templates
- Simple way to author Azure resources
- Transpiles to standard ARM Template JSON files

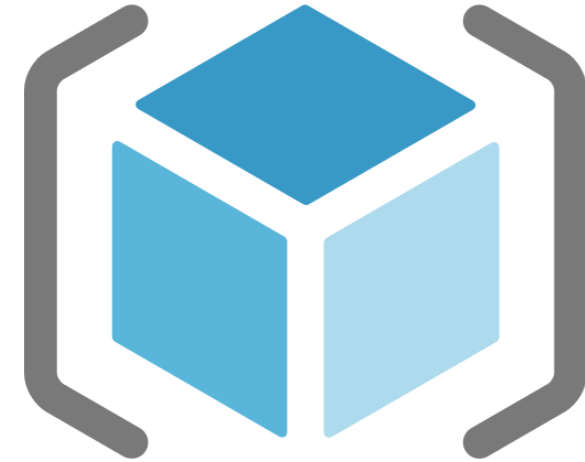


Bicep Language vs ARM templates



Why Bicep language?

- Easy to understand and maintain
- Day one support
- Transparent abstraction
- Awesome tooling in VS Code
- Clean code syntax
- Code re-use and modularity
- Deep integration with Azure
- Preflight validation
- No state management
- Production support

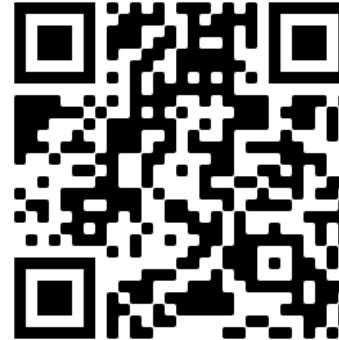


Bicep resources for beginners

Azure Bicep – First Look course 🧑🏫



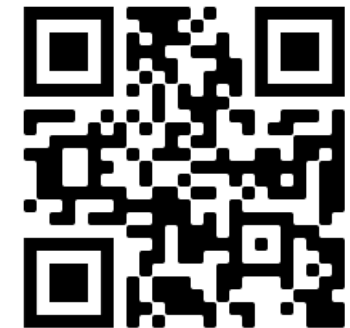
Learn Bicep – GitHub



AWESOME Azure Bicep 🙌



Bicep Project - GitHub



Default Bicep linter rules

- Integrated into Bicep CLI & extension
- Taken from arm-ttk test cases
- To use it, Bicep version ≥ 0.4
- Customization options



Bicep configuration file

- What is config file?
- Why you need one?
- Overwrites the default rules?
- How to create one?



Azure Bicep best practices



Demos

```
2-deploy-param-storage.bicep 1, M  {} bicepconfig.json X
{} bicepconfig.json > {} analyzers > {} core > {} rules > {} secure-parameter-default
You, 3 weeks ago | 1 author (You)
1  {
2    "analyzers": {
3      "core": {
4        "enabled": true,
5        "verbose": true,
6        "rules": {
7          "no-hardcoded-env-urls": {
8            "level": "warning"
9          },
10         "no-unused-params": {
11           "level": "warning"
12         },
13         "no-unused-vars": {
14           "level": "error"
15         },
16         "prefer-interpolation": {
17           "level": "warning"
18         },
19         "secure-parameter-default": {
20           "level": "error"
21         },
22         "simplify-interpolation": {
23           "level": "warning"
24         }
25       }
26     }
27   }
```

TERMINAL DEBUG CONSOLE PROBLEMS 3 OUTPUT

```
9  @description('Azure region to deploy all resources')
10 @allowed([
11   'eastus'
12   'eastus2'
13   'westus'
14   'westus2'
15 ])
16 param environment: string
17
18 param environment string
19
20 resource myResourceGroup 'Microsoft.Resources/resourceGroups@2021-04-01'
```

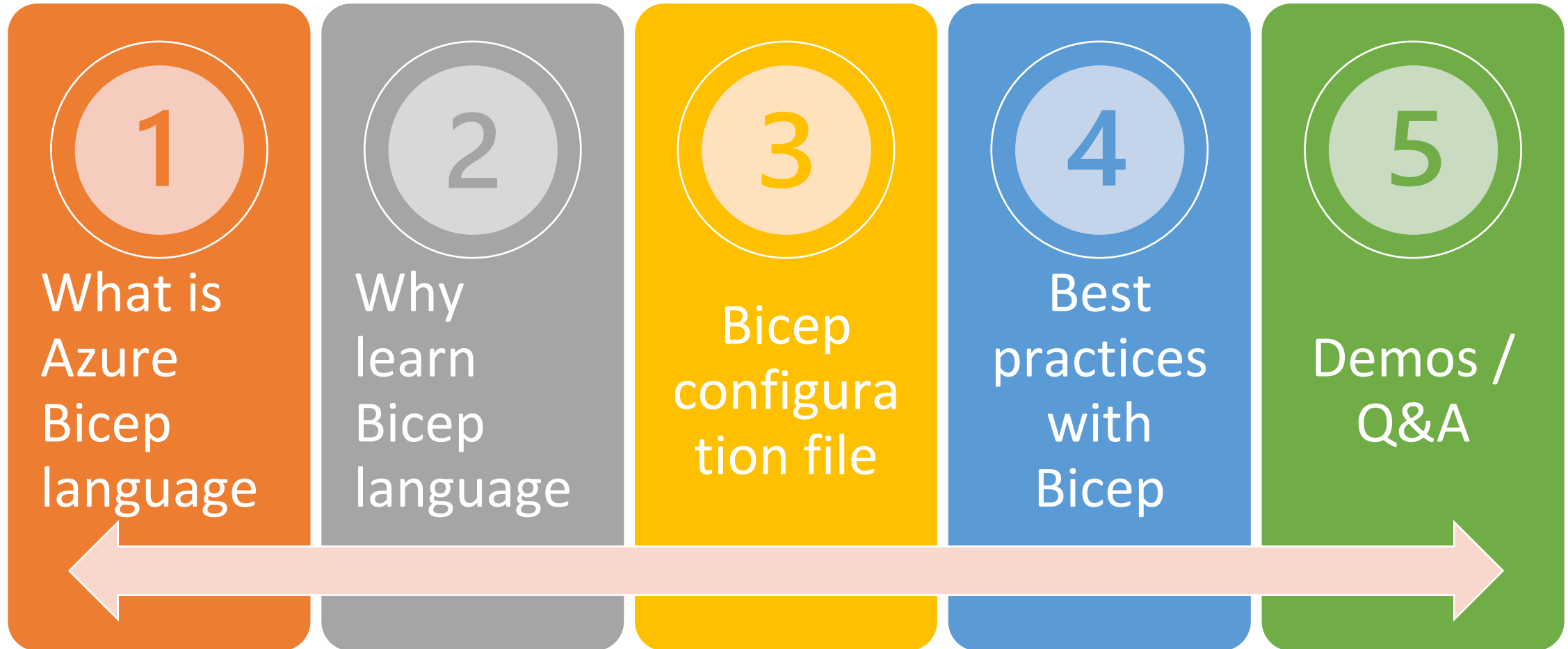
Parameter "environment" is declared but never used. bicep core(

View Problem No quick fixes available

You, a minute ago • Uncommitted changes



What we covered





Thank you