

TESTING & AUTOMATION
EMPOWERING THE
DEVOPS
S H I F T



ANSHUL LALIT
KONGSBERG DIGITAL

Where do we come from?

A little over 2.5 years ago:

- Legacy Coded UI based automation suites for monoliths
- Selective API automation
- In-house utils for I/O tests
- Manual was ~65% of testing efforts in majority of the projects
- We had to hunt for unit test compliance in projects
- Few projects weren't optimized with their "dev methodologies" (ahm...Agilefall, WaterGile – you name it!)



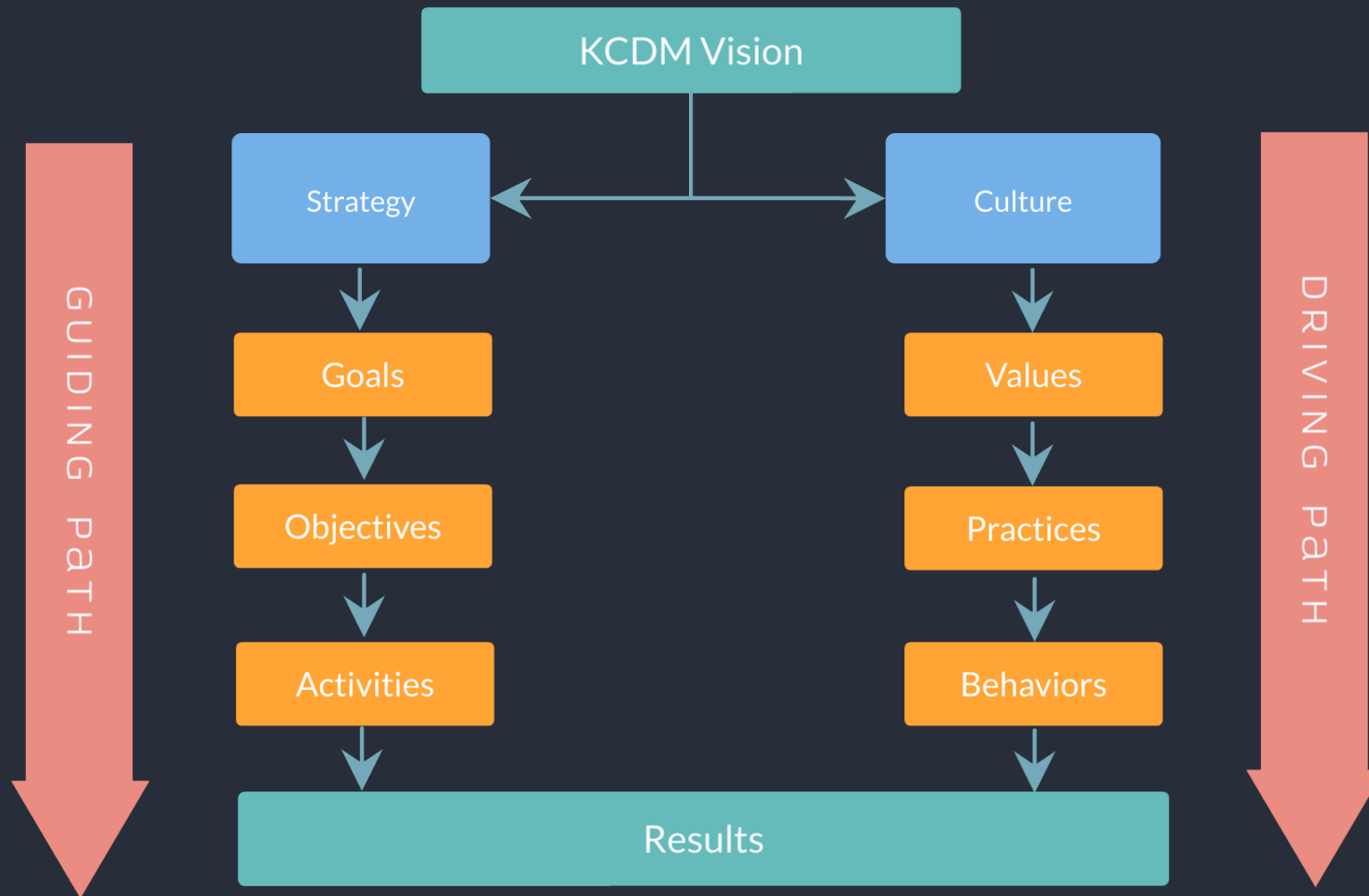
What is Automation to us?

- We treat automation as our DevOps DNA
- Knowing the importance of automation was only 1st step
- We identified our automation needs across the board and didn't limit to just "testing or QA" area. Automation is bigger than that.
- It is vital to remember "automation is NOT DevOps" and our KCDM model helps us with that.

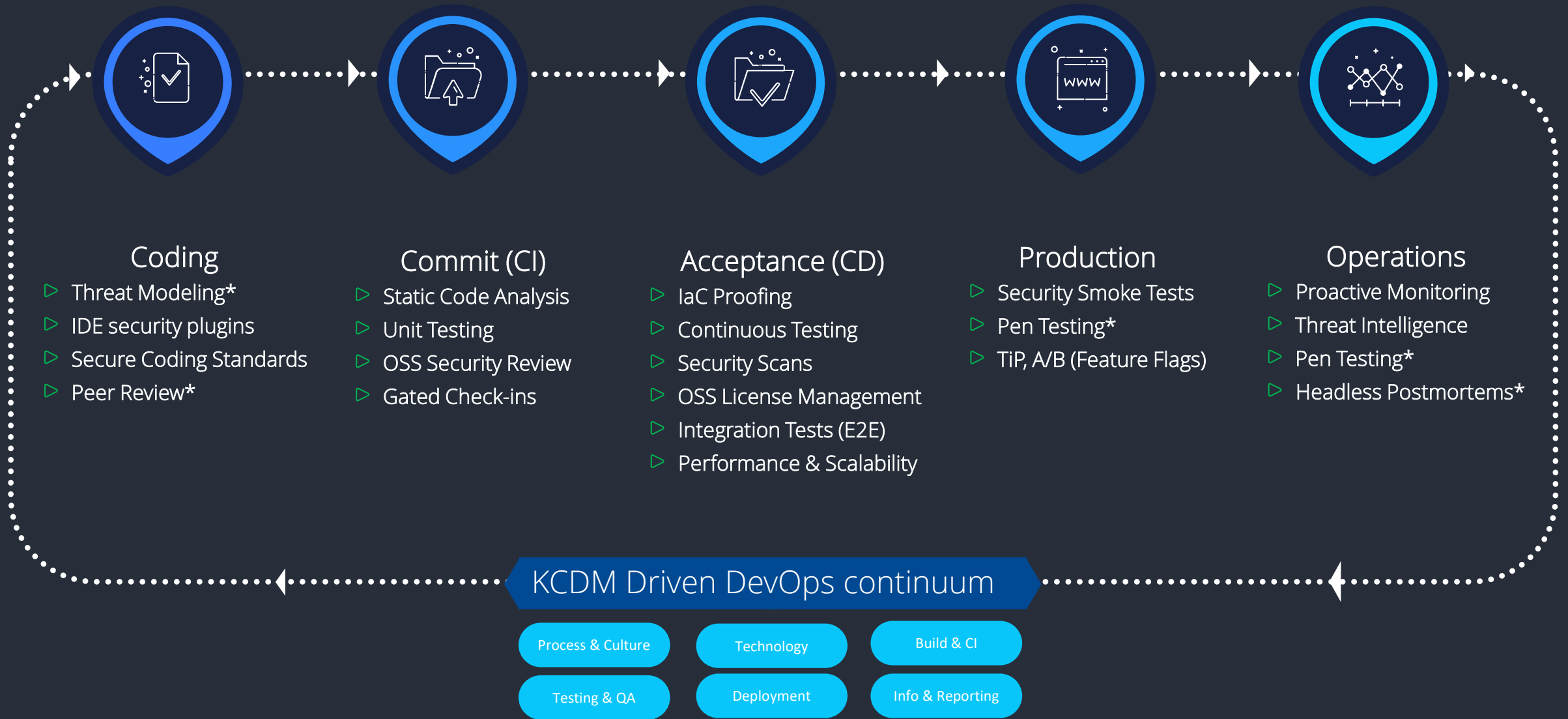


Strategy vs. Culture

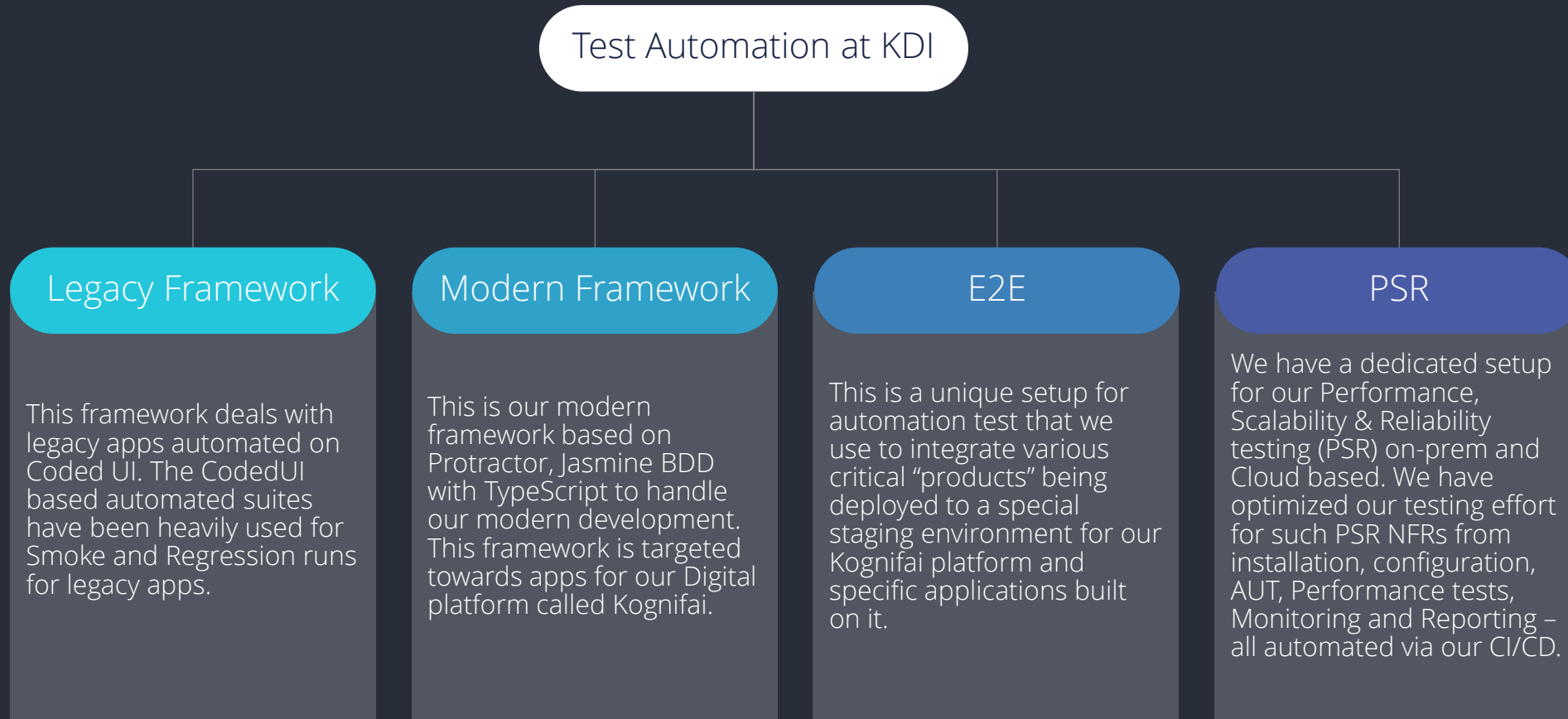
How the guiding and driving path matches towards results



Mindset Shift by Design – Automation & Security



Test Automation Overview





Galaxy – State-free transition to on-prem or cloud labs



Our backbone
is **Fluid**
Automation
Architecture

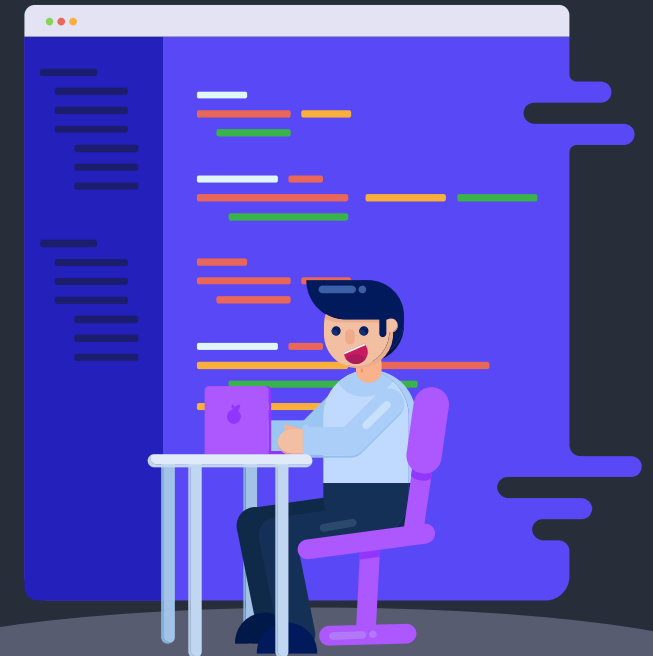
Galaxy - Scripting reduction by at least 50% (EIW)

```
26 [GeneratedCode("Coded UITest Builder", "14.0.23107.0")]
27 4 references
28 public partial class UIMap
29 {
30     1 reference
31     public void RecordedMethod1()...
32
33     Properties
34
35     Fields
36 }
37
38 [GeneratedCode("Coded UITest Builder", "14.0.23107.0")]
39 3 references
40 public class RecordedMethod1Params...
41
42 [GeneratedCode("Coded UITest Builder", "14.0.23107.0")]
43 4 references
44 public class UIGoogleInternetExplorerWindow ...
45
46 [GeneratedCode("Coded UITest Builder", "14.0.23107.0")]
47 4 references
48 public class UIGoogleDocument ...
49
50 UI Map Mgmt - CodedUI
```

```
16 [Parent(ID = 1, ControlType = ElementType.BrowserWindow, Properties = "Name=Google - Internet Explorer",
17 [Parent(ID = 2, ControlType = ElementType.Document, Properties = "Id=gsr;TagName=BODY",
18 UITechnology = UITechnology.Html)]
19 2 references | 126 days ago | 1 author, 1 change
20 public class GoogleSearch : Page
21 {
22     string assembly = Assembly.GetExecutingAssembly().GetName().Name;
23     0 references | 126 days ago | 1 author, 1 change
24     public GoogleSearch(RunContext context) : base(Assembly.GetExecutingAssembly().GetName().Name)
25     { }
26
27     [Find(UIType = UITechnology.Html, ControlType = ElementType.Edit, Properties = "Name=q;TagName=INPUT")]
28     1 reference | 0/1 passing | 126 days ago | 1 author, 1 change
29     public UITestControl SearchBox { get; set; }
```

Element Interface Wrapper

Happy
Programmers



Galaxy - Intelligent Failure Analytics built-in

A whopping **96%**
reduction on
failure analysis



Galaxy - TROS (Test Run Operating System)

Probably the **best**
feature in **Galaxy**
Framework



Self-Service Agents: Making our lives better!



- IaC - Common Azure Services provisioning with pre-defined NSGs
- Custom pipeline tasks facilitating automated code signing, code obfuscation etc.
- Project and user provisioning (approval based automation)
- Cloud Cost Optimization, Smart indicators for idle resources
- DevTest Labs
- Certificates as a Service

AND IT'S A WRAP.

“

Go find your DevOps success blueprint, its just beneath the challenges you take for granted.

”

- Anshul Lalit -



<https://www.linkedin.com/in/a-lalit/>



<https://github.com/alalit/>



[DoT - Applying essence towards DevOps scalability \(Presentation\)](#)