

# Deploying enterprise application in Server based Architecture versus Serverless Architecture

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# Agenda

- Serverless Architecture
  - Why Enterprise Applications need Serverless?
- Use Cases for Serverless Architecture
  - Industry specific Use Cases
- Serverless in Action
  - Working demo
- When Not to adopt Serverless Architecture?
  - No one fit solution for all



# WHY SERVERLESS ARCHITECTURE?

# Serverless Architecture in 4 letter acronym

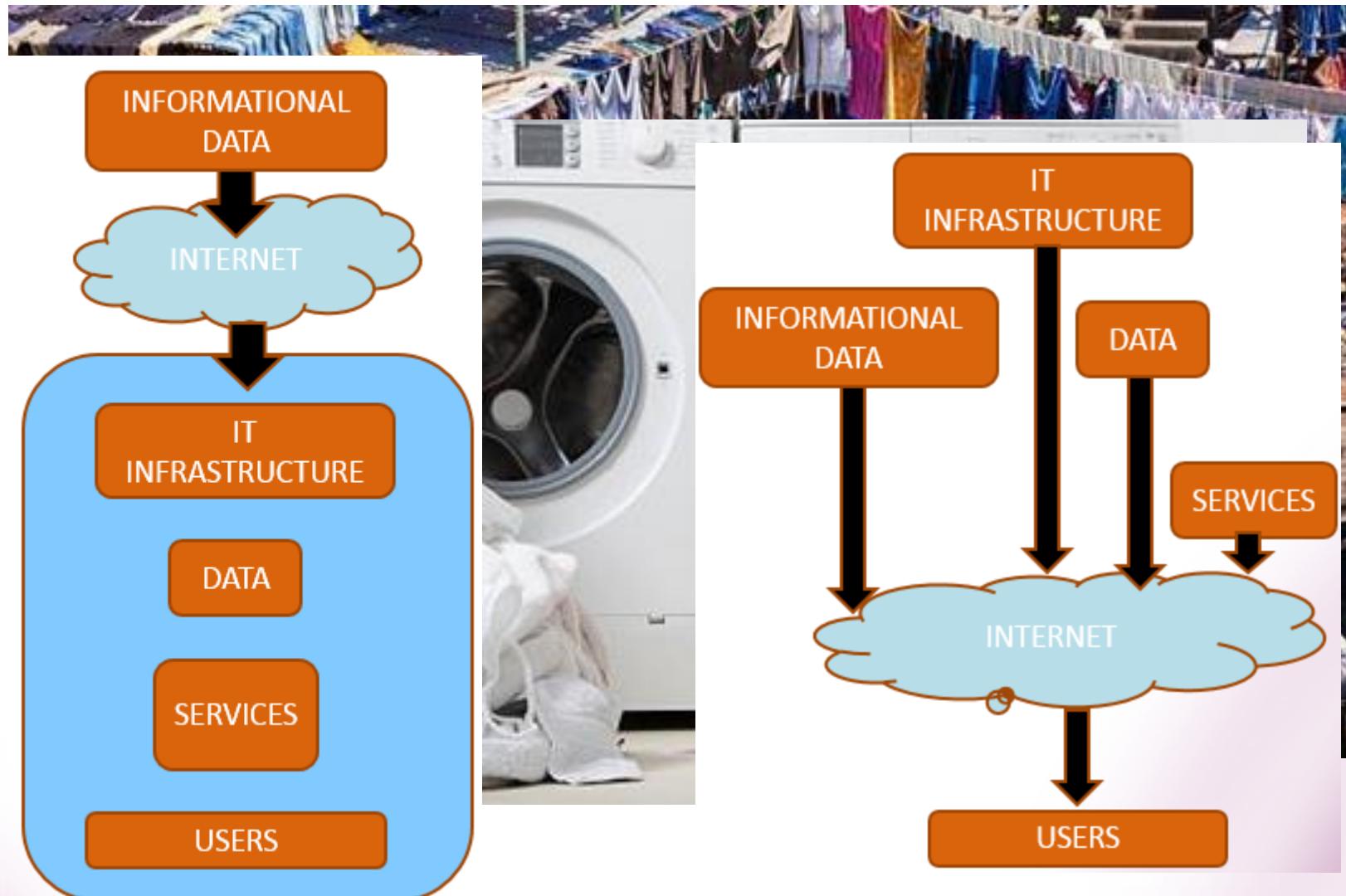
IaaS

PaaS  
FaaS  
SaaS

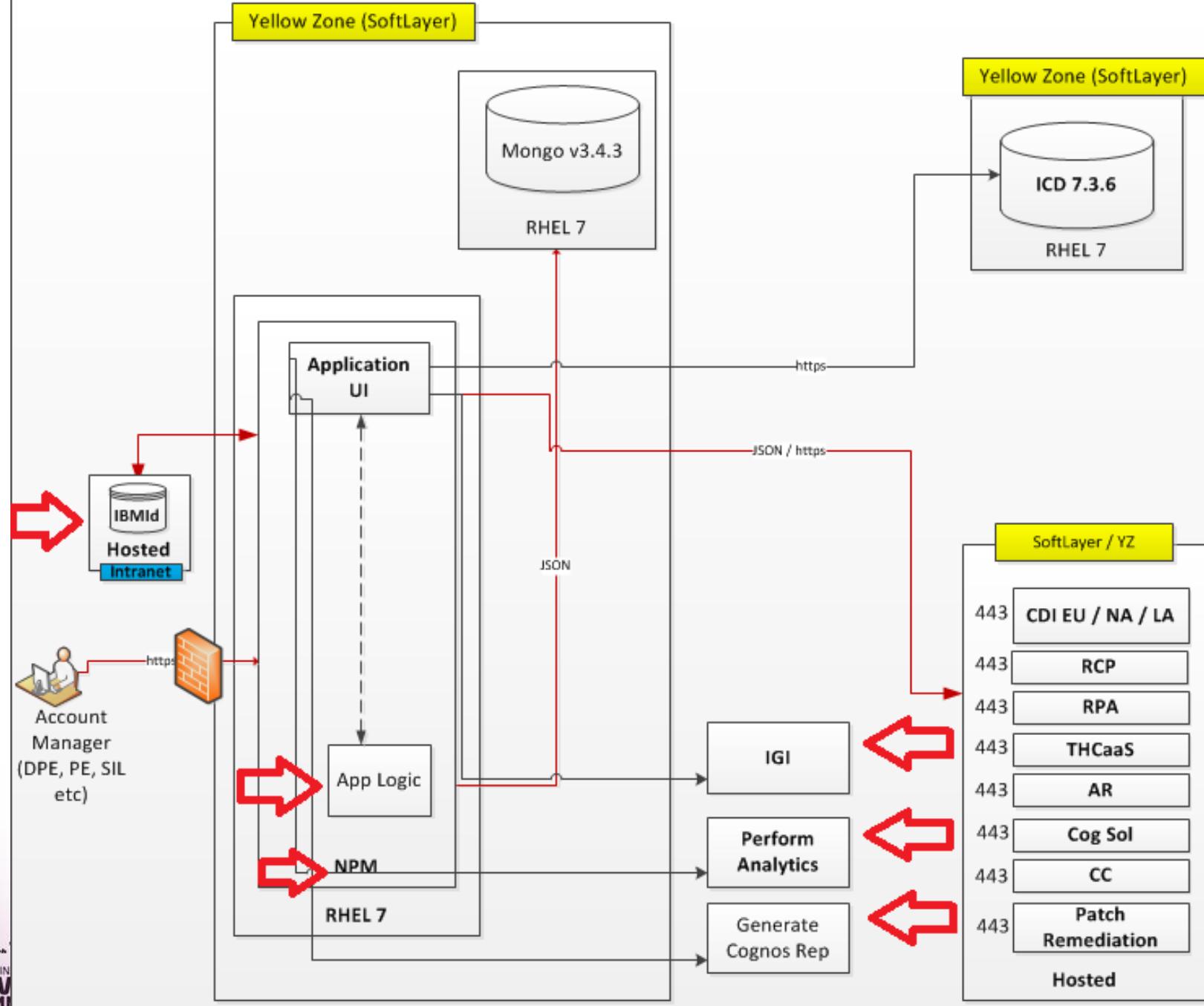
DBaaS

Functions XaaS As A Service

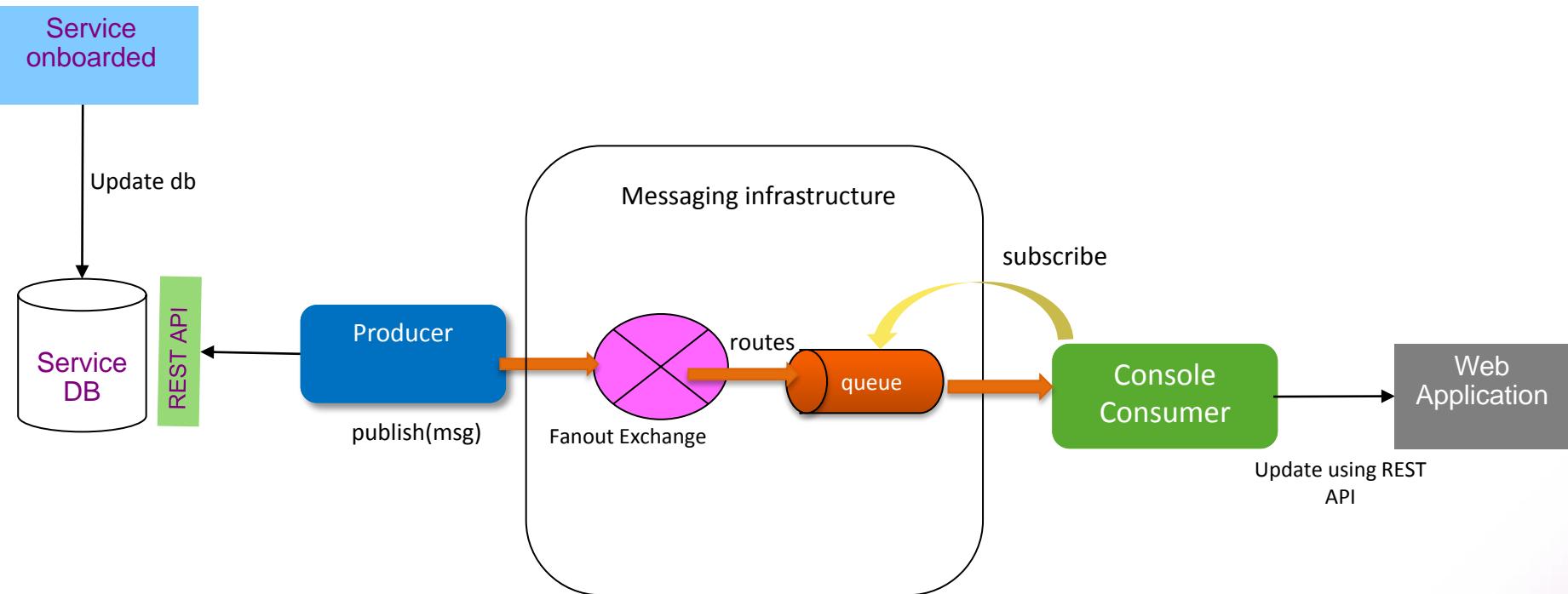
# Does “Serverless” mean “No Server”?



# Does “Serverless” mean “No Server”?



# Why Serverless? – Event Driven



Triggers  
(Publisher)

Rule  
(Topic)

Actions  
(Subscriber)

Code resides  
here

# How to write Serverless code?

Code resides here

Event Source

Triggers  
(Publisher)

Rule  
(Topic)

Actions  
(Subscriber)

```
C:\Program Files\IBM\Bluemix>bx wsk trigger create ispwtrigger --feed /whisk.system/alarms/alarm -n cron "*/10 * * * *" -n trigger payload "<>\"username\":\""
```

```
C:\Program Files\IBM\Bluemix\bin>bx wsk action create triggered triggered.js fe767icfb6
ok: created action triggered
```

```
C:\Program Files\IBM\Bluemix\bin>
C:\Program Files\IBM\Bluemix\bin>bx wsk trigger fire ispwtrigger
ok: triggered /_/ispwtrigger with id
```

```
C:\Program Files\IBM\Bluemix\bin>bx wsk rule create ispwRule ispwtrigger trigger
ed
ok: created rule ispwRule
```

```
C:\Program Files\IBM\Bluemix\bin>
```

```

    "key": "limits",
    "value": {
        "logs": 10,
        "memory": 256,
        "timeout": 60000
    },
    "key": "initTime",
    "value": 254
},
{
    "duration": 560,
    "end": 1520765456046,
    "logs": [],
    "name": "alarm",
    "namespace": "gautambh@in.ibm.com_dev",
    "publish": false,
    "response": {
        "result": [
            {
                "status": "success"
            },
            {
                "status": "success",
                "success": true
            }
        ],
        "start": 1520765455486,
        "subject": "gautambh@in.ibm.com",
        "version": "0.0.133"
    }
}
ok: created trigger ispwtrigger
```

```
C:\Program Files\IBM\Bluemix>
```

# Why Serverless?

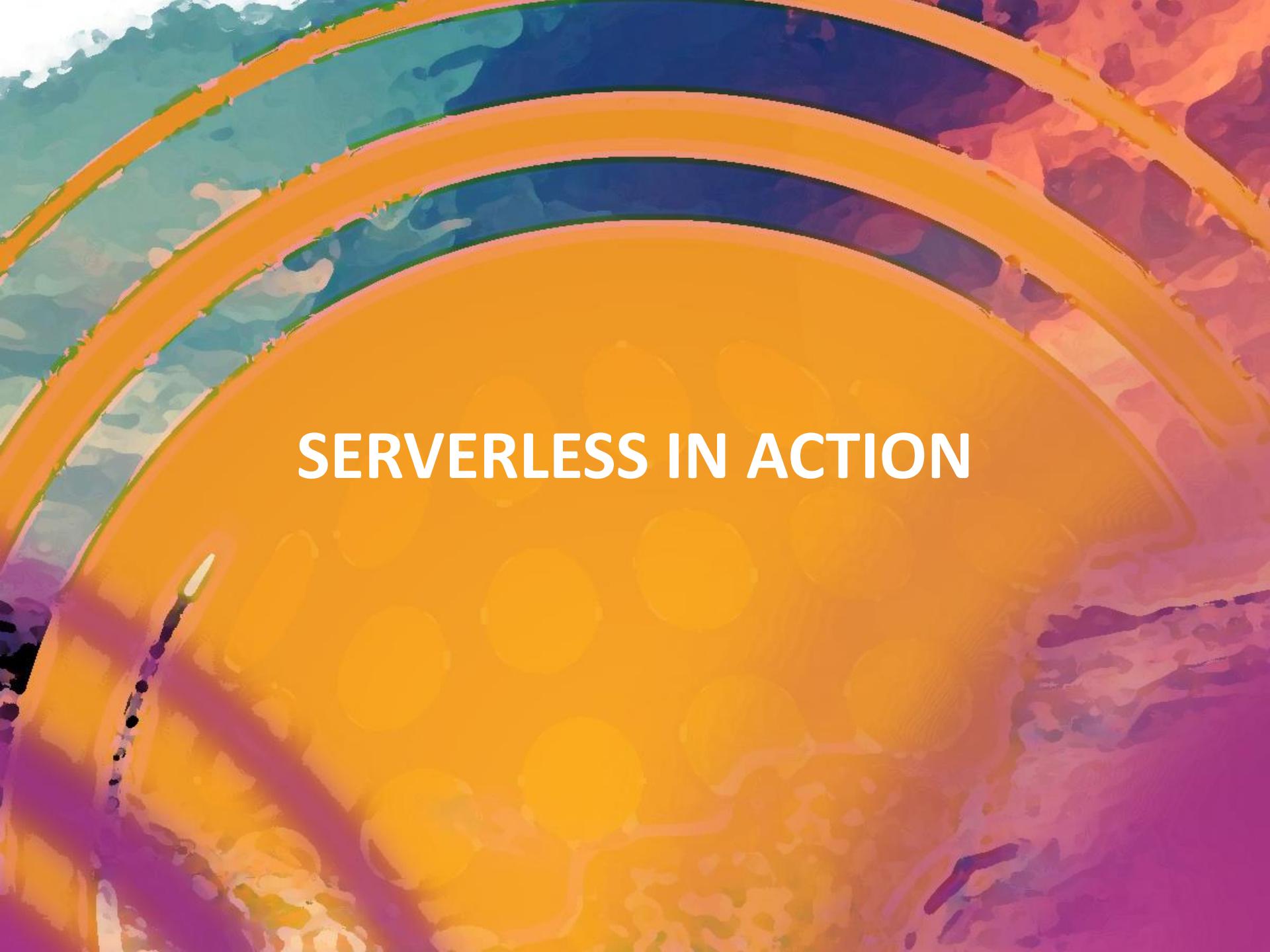
Speed of development  
Fewer Software components  
Self-contained  
& Hardware  
application product  
components to manage

The background features a vibrant, abstract design. It consists of several concentric, rounded shapes in shades of orange, yellow, and pink. In the upper left corner, there's a stylized illustration of a rocket launching from a white plume of smoke, leaving a black trail. The overall aesthetic is dynamic and futuristic.

# USE CASES

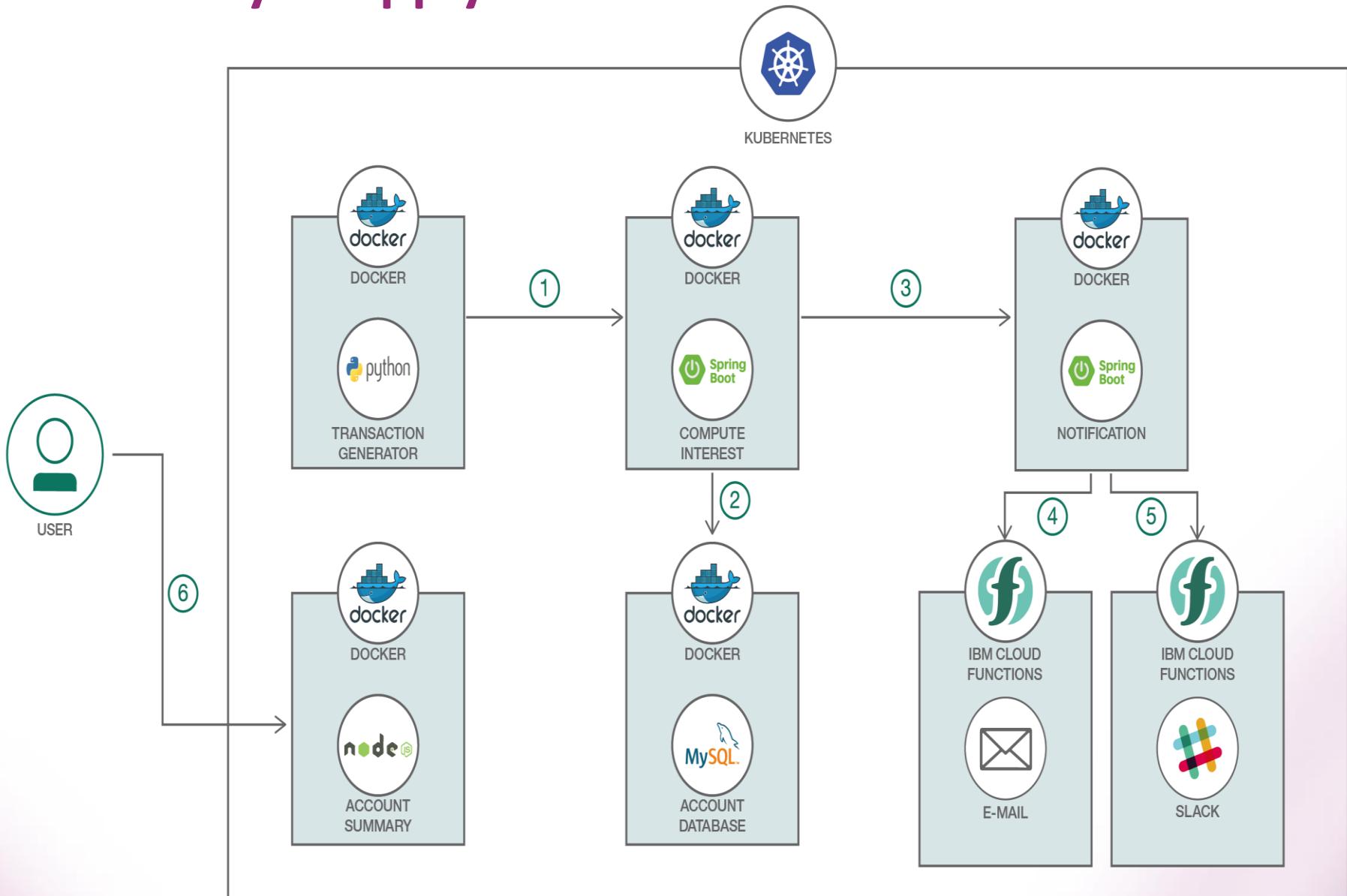
# Where do you apply Serverless Arch?

- **Mobile Backend Development**
  - Serverless could help developers better decouple front and backend development by helping enterprises create serverless microservices with API backends
- **Data Processing**
  - Image processes on serverless architecture handles key spikes in need rather than maintain unnecessary compute resources the rest of the time
- **Insurance company for Cognitive Processing**
  - Insurance company using drones to take images of properties and then using cognitive processing in a serverless environment to identify property damages and speed up insurance payment calculations or to carry out risk assessments.
- **Real Time Streaming**
  - System needs to react to streaming real-time data feeds; Integration with Kafka and Bluemix where data posted in Kafka can immediately start being analyzed. Financial use cases are one of the key pure streaming analytics serverless examples

The background features a vibrant, abstract design. It consists of several concentric, rounded shapes in shades of orange, yellow, and blue. In the lower-left foreground, a white rocket ship with a black base and a trail of small dots is shown launching upwards, leaving a white wake against the orange-yellow gradient.

# SERVERLESS IN ACTION

# Where do you apply Serverless Arch?

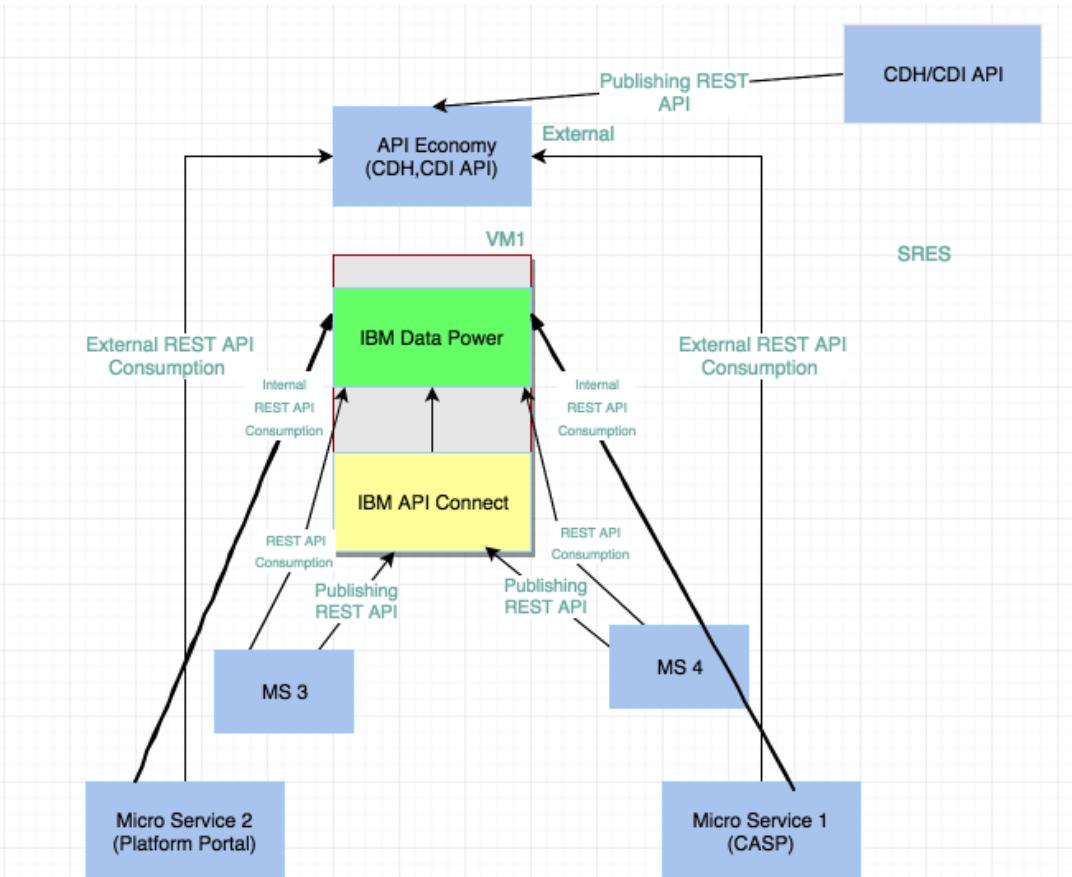


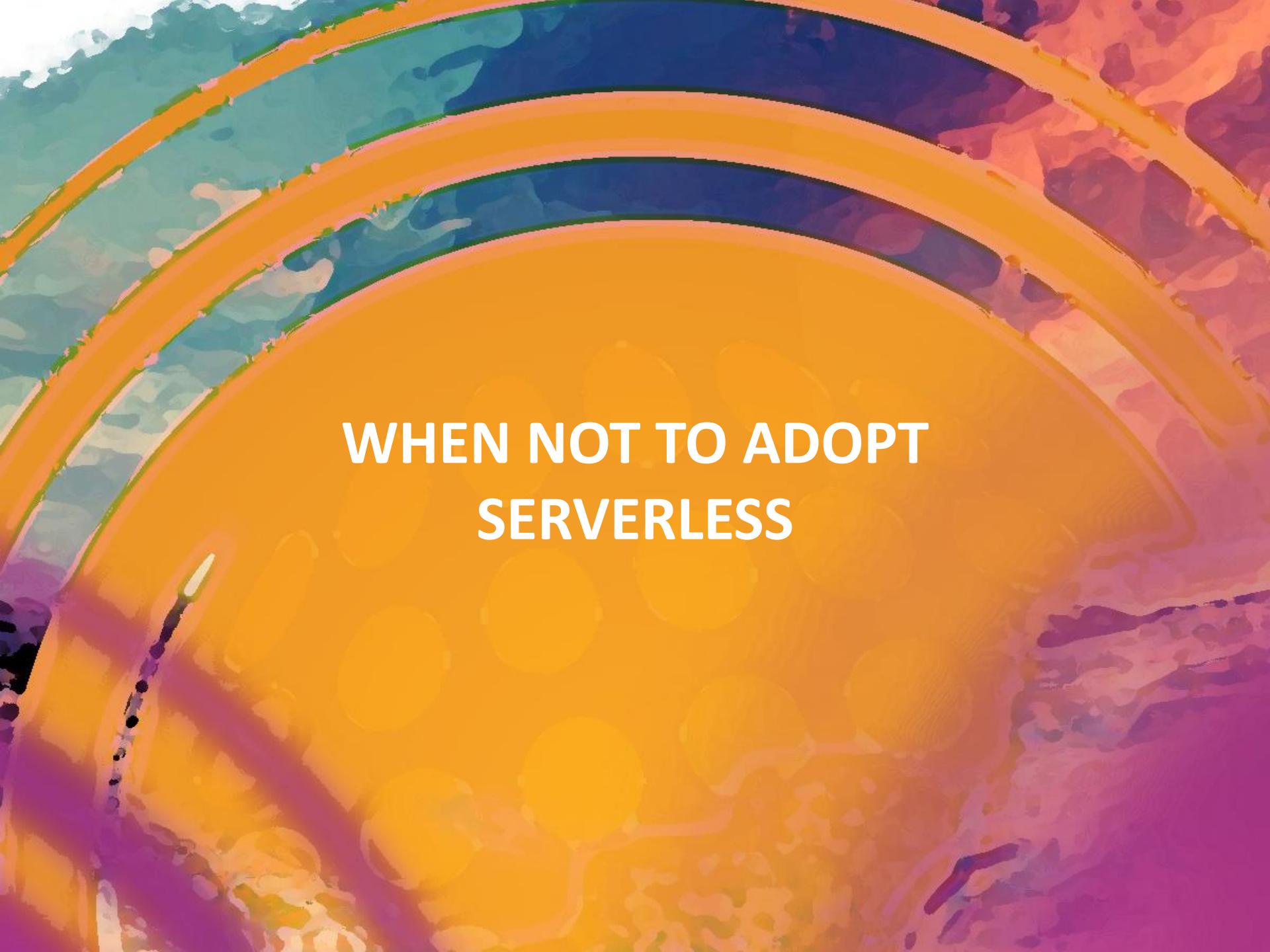
The background features a vibrant, abstract design. In the center is a large, solid orange circle. Surrounding it are several concentric arcs in shades of yellow, orange, and blue. The outermost layer consists of a textured, brush-stroke style in the same color palette. In the bottom left corner, there's a stylized illustration of a rocket ship launching upwards, leaving a trail of small white dots.

**CODE PATTERN**

# Serverless Architecture development using Code Pattern

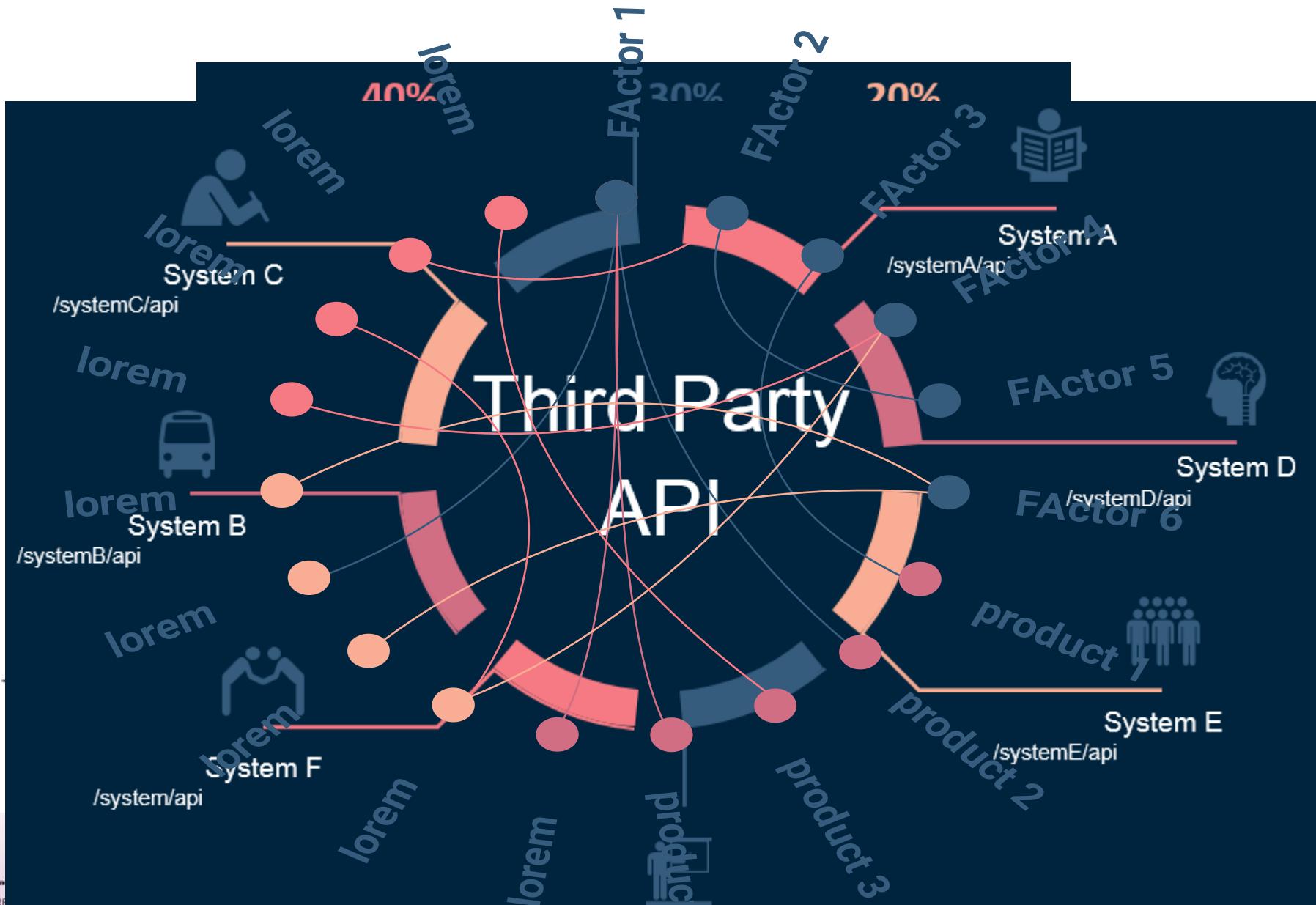
- [https://developer.ibm.com/code/patterns/?cm\\_sp=Developer--code--](https://developer.ibm.com/code/patterns/?cm_sp=Developer--code--)
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The background features a large, central yellow circle with a dark blue outline. This circle is set against a backdrop of abstract, colorful brushstrokes in shades of orange, teal, blue, and purple. The overall effect is artistic and dynamic.

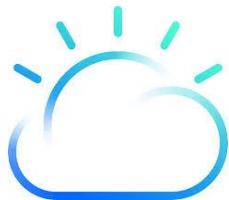
# WHEN NOT TO ADOPT SERVERLESS

# Serverless is Great but Greatness does not apply everywhere





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## Code & instructions



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# Thank you



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