



Identity Management In a Cloud Native World

Arun Binaykia

Cloud Native != The Cloud

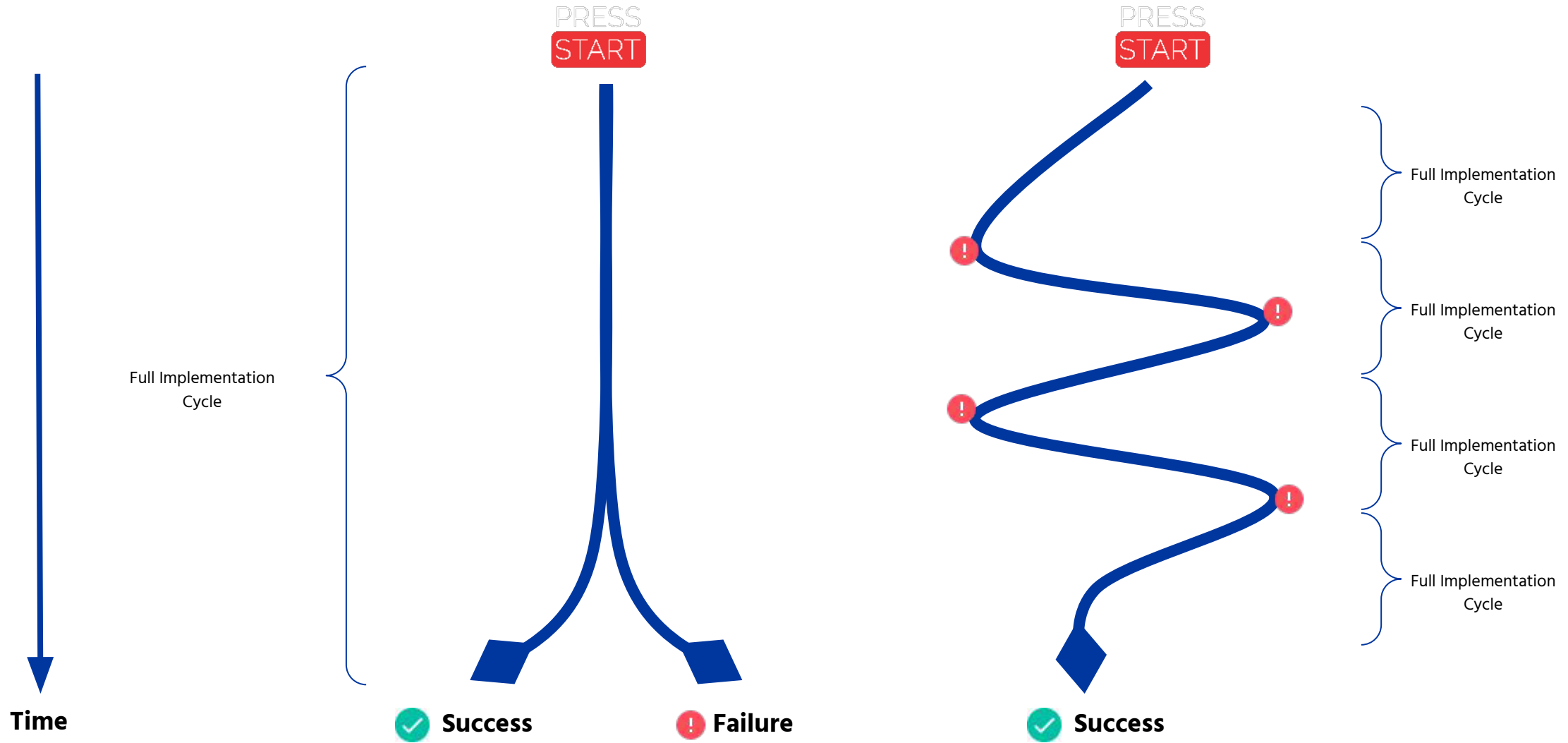
Cloud Native Advantages

- Scalable
- Public, Private and Hybrid Clouds
- Immutable Infrastructure
- Resilient
- Manageable
- Observable
- Automation

Cloud Native Technologies

- Containers
- Service meshes
- Microservices
- Declarative APIs
- Loosely coupled systems

Agility in IAM World



The Old IAM Way

Time run out, no time to recover.

Fail Fast Model

You will reach the success point always.

Core Development Models

1

Interfaces / API

2

**Single Page
App**

3

**Stateless
Function**

4

**Schemaless
Data**

Core Operational Frameworks

1

Containerization

2

**Dynamic
Management**

3

Microservices

4

Orchestration

All About Services

1

**Infrastructure as
a Service**

2

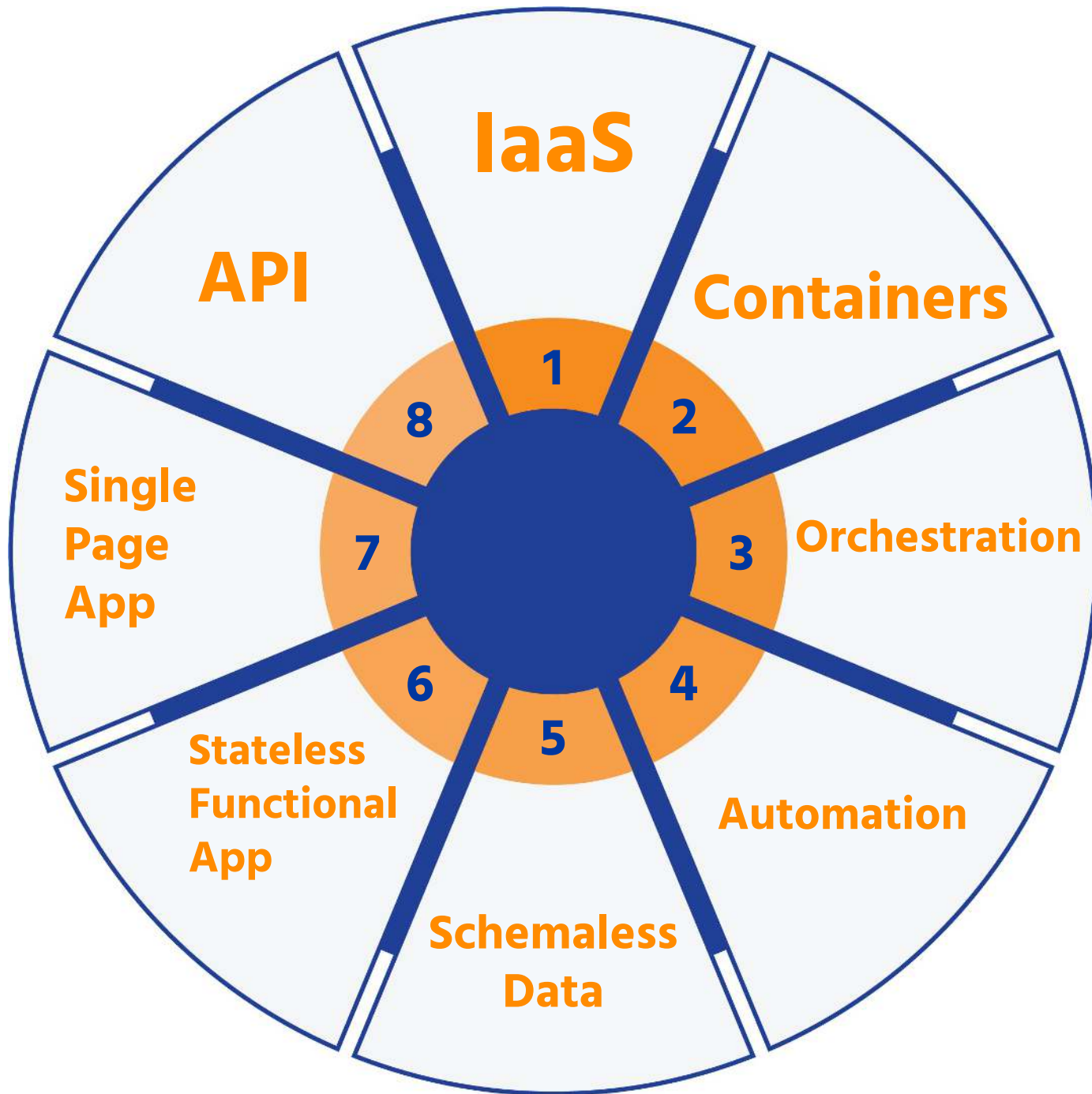
**Platform as a
Service**

3

**Software as a
Service**

4

**Container as a
Service**



Culture

- Waterfall
 - Risk Averse
 - Predictive
 - Slow
- Cloud Native
 - Agility with flex
 - Learning to drive a car after a lifelong horse buggy ride
 - Trying to do cloud native by using methods from your previous paradigm will wreck your initiative

Maturity Matrix

- Culture
- Product/Service Design
- Team
- Process
- Architecture
- Maintenance and Operations
- Delivery
- Provisioning
- Infrastructure

Maturity Matrix

Stage	NO PROCESS	WATERFALL	AGILE	CLOUD NATIVE	NEXT
CULTURE	Individualist	Predictive	Iterative	Collaborative	Experimental
PROD/SERVICE DESIGN	Arbitrary	Long-term plan	Feature driven	Data driven	All driven
TEAM	No organization, single contributor	Hierarchy	Cross-functional teams	DevOps / SRE	Internal supply chains
PROCESS	Random	Waterfall	Agile (Scrum/Kanban)	Design Thinking + Agile + Lean	Distributed, self-organized
ARCHITECTURE	Emerging from trial and error	Tightly coupled monolith	Client server	Microservices	Functions
MAINTENANCE	Respond to users complaints	Ad-hoc monitoring	Alerting	Full observability & self-healing	Preventive ML, AI
DELIVERY	Irregular releases	Periodic releases	Continuous Integration	Continuous Delivery	Continuous Deployment
PROVISIONING	Manual	Scripted	Config. management (Puppet/Chef/Ansible)	Orchestration (Kubernetes)	Serverless
INFRASTRUCTURE	Single server	Multiple servers	VMs (pets)	Containers/ hybrid cloud (cattle)	Edge computing

CURRENT SITUATION

GOAL

Cloud Native Identity Management

- All business operations available through API.
 - Provision, Reconcile, Certify, Request, Approvals
 - Every API accessible and supported for deeper integration
- Mature Authorization Model
 - Every UI Event, Every API call
 - Configurable and Auditable Authorization
 - Zero Trust Model -
 - Really Really small kernel space
- Extensible - Write your own addon
 - Extend Authorization Model
- On Prem and On Cloud
 - SaaS, IaaS, PaaS

Acknowledgement

Cloud native transformation patterns. Cloud Native Transformation Patterns. (n.d).
<https://www.cnpatterns.org/>.

Reznik, P., Dobson, J., & Gienow, M. (2020). Cloud native transformation: Practical patterns for innovation. O'Reilly.



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Thank You