
AWS
re:Invent
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Chase International: Always-on customer experience at scale

Paul Clark (he/him)

Managing Director,
Chase International
JPMorgan Chase

Courtney de Lautour (he/him)

Executive Director,
Chase International
JPMorgan Chase

Colin Marden (he/him)

Senior Solutions Architect,
Global Financial Services
Amazon Web Services

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Agenda

Why did JPMorgan Chase build Chase International?

Customer experience at Chase and why it matters

Accelerating speed to market through the cloud

Moving fast and staying secure

Challenges and key takeaways

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Why JPMC built Chase International

- Launched in September 2021
- First major retail banking operation outside of the US
- Over £10 billion in deposits
- 1 million+ customer accounts
- 92 million+ payment and card transactions processed

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Customer experience and why it matters



On-demand customer service via preferred channels

50% of customers currently interact with their bank via web and mobile applications at least once a week, compared to 32% in 2019



Targeted product and service offers

If done well, personalization at scale can lead to annual revenue uplifts of **10%** for banks



Consistent, automated, omnichannel experiences

Banks that enhance the physical experience with features in their mobile app (e.g., pre-appointment reminders, balance notifications, or warnings) can boost customer satisfaction by up to **60%**

1. McIntyre et al., “Banking Consumer Study,” https://accntu.re/3tRKdYo
2. Brodski et al., “Personalization in Banking,” https://on.bcg.com/3GCLElh
3. Khon et al., “Balancing Digital and Physical Channels,” https://mck.co/3tTf2Mg

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“There are profits to be made but if you are subscale or have a high-cost infrastructure, you’re not going to make it work.”

Sanoke Viswanathan

CEO, Chase International

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Core development tenets

- Reliability
- Observability
- Securability
- Evolvability
- Repeatability
- Low power distance

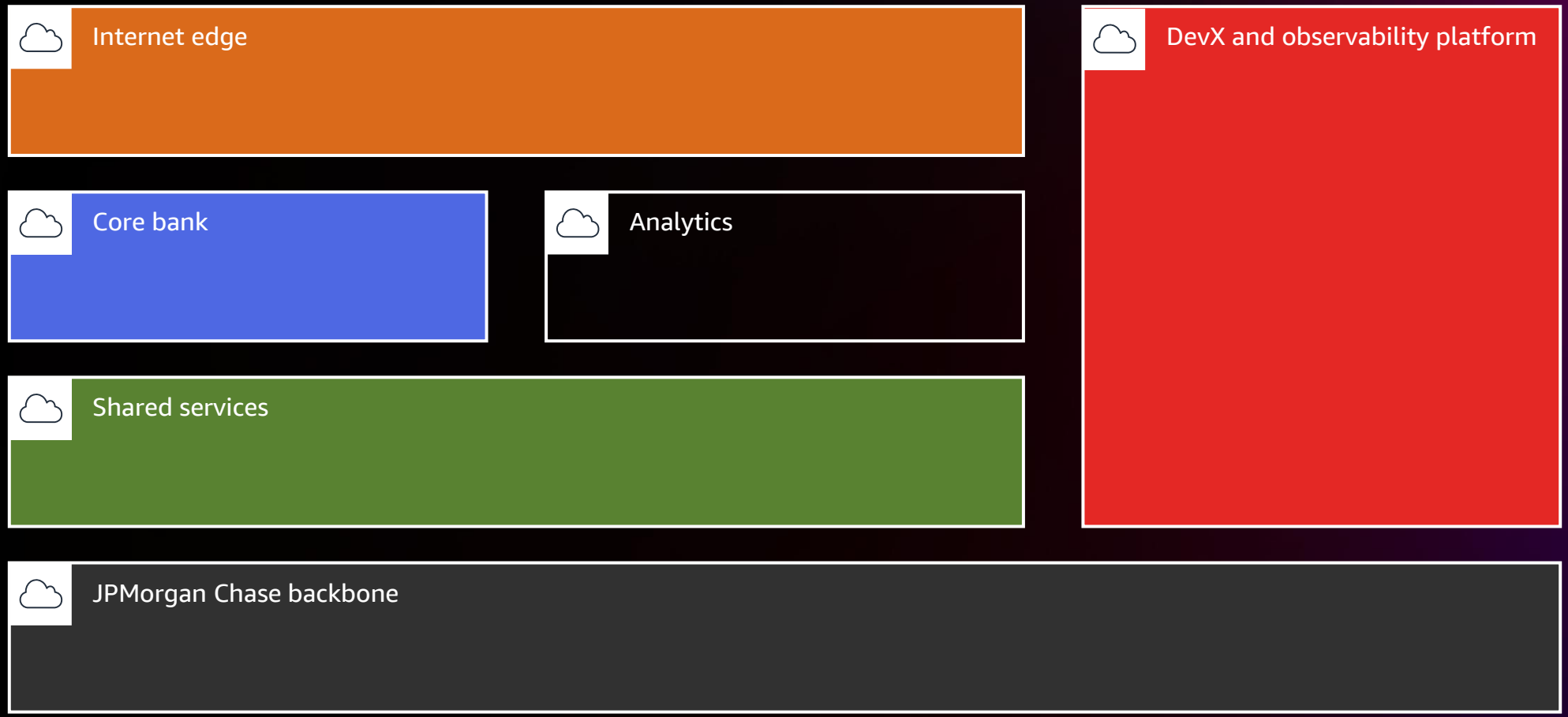
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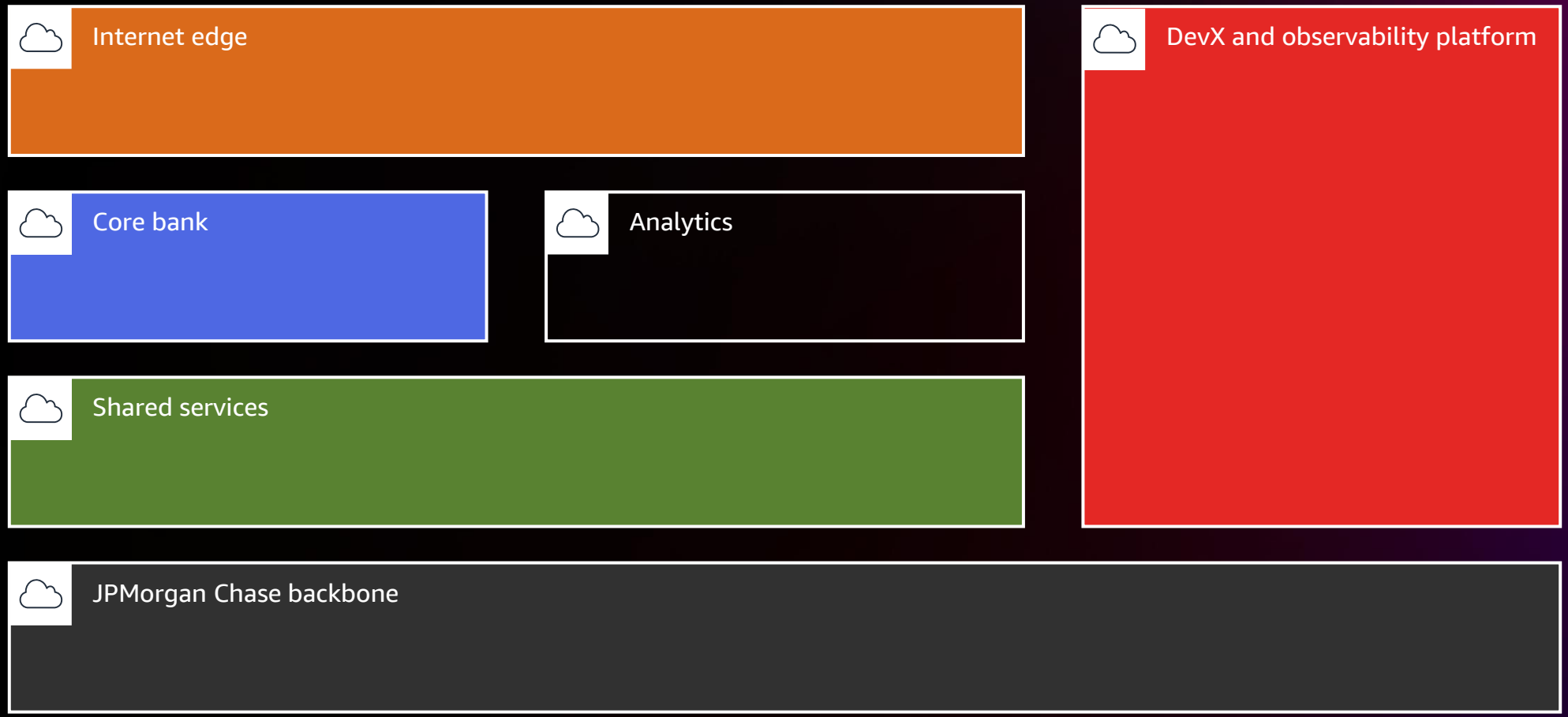
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Account structuring and paving



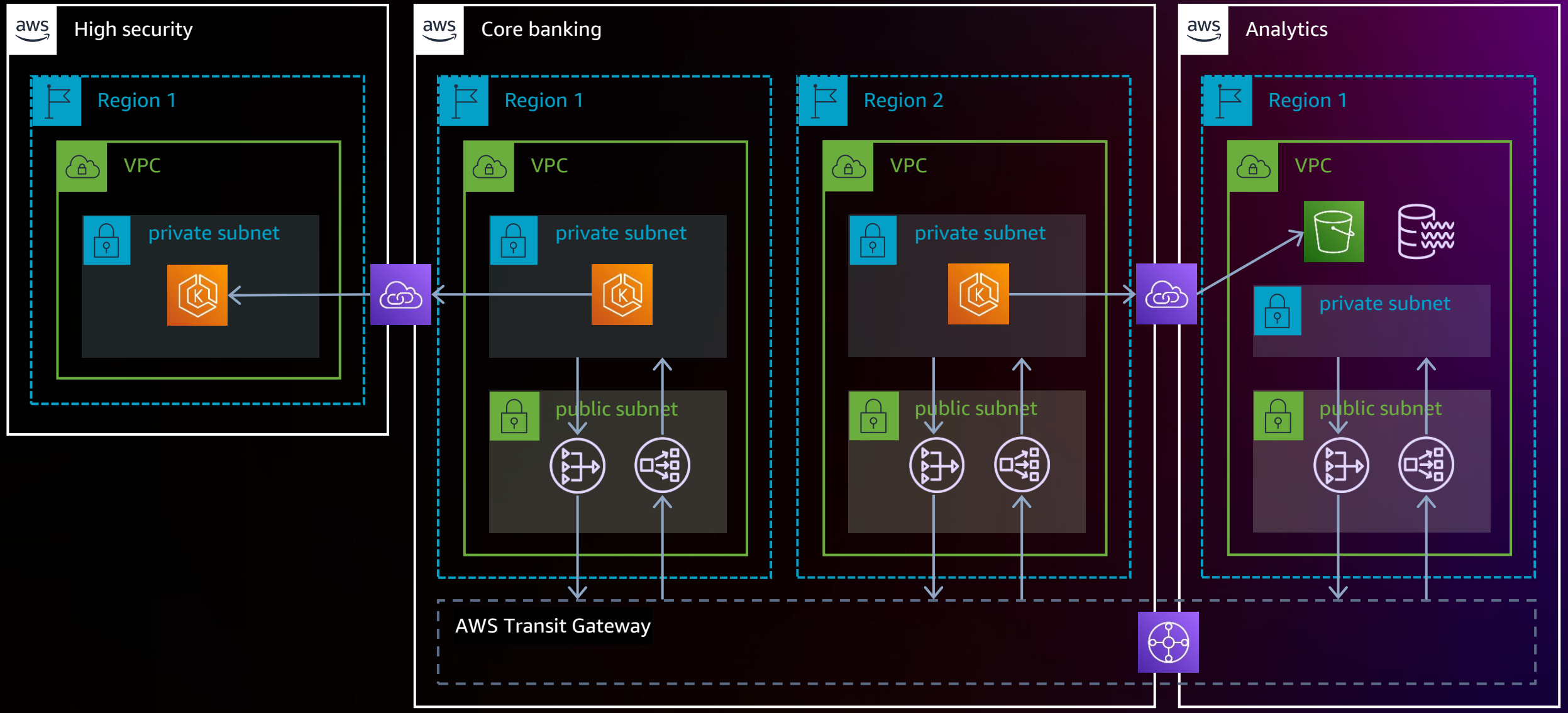
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Account structuring and paving



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High-level architecture

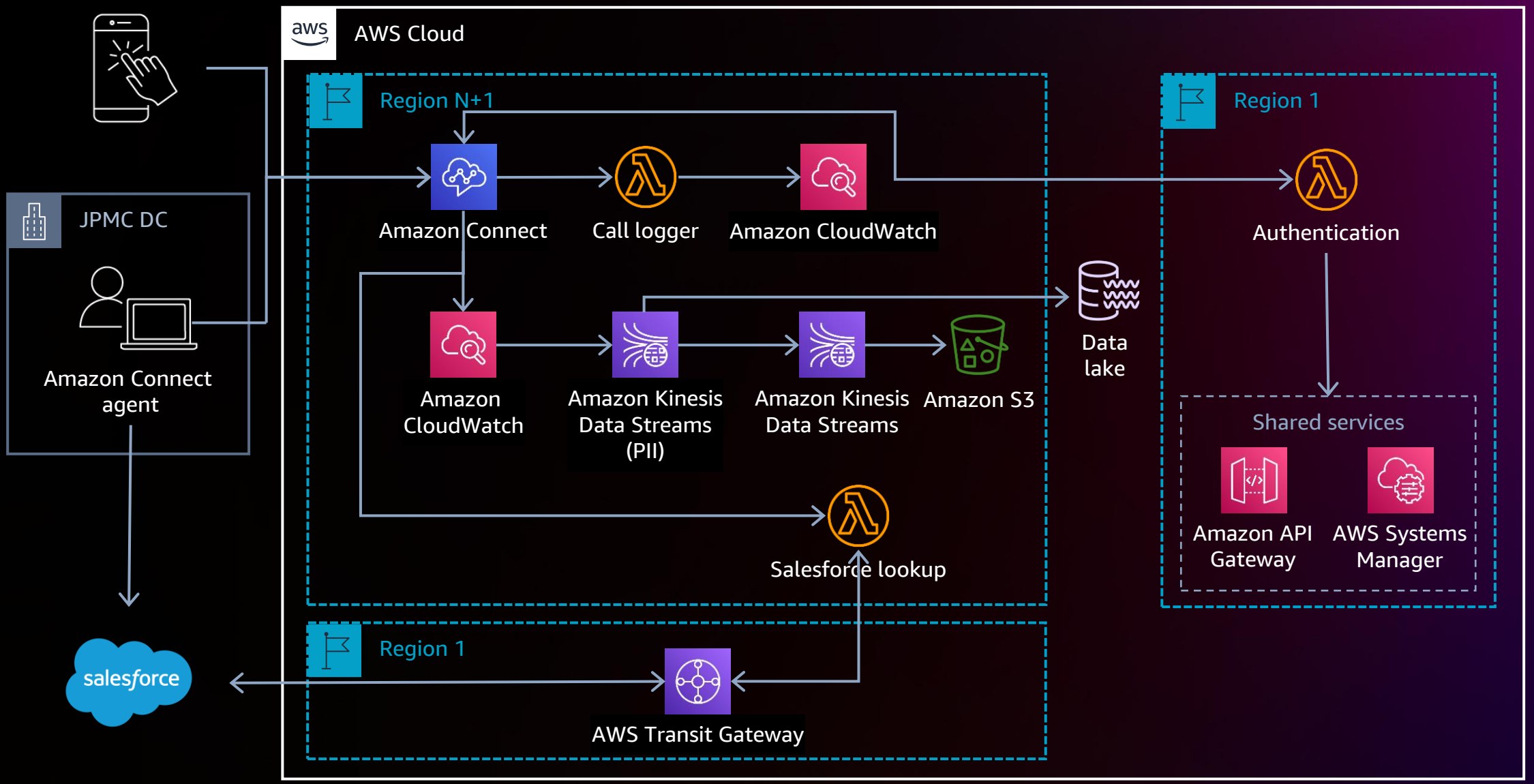


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Accelerating speed to market through the cloud

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Contact center



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Microservices



Application code



Build artifacts



Infrastructure



Load testing



Migrations



API definition

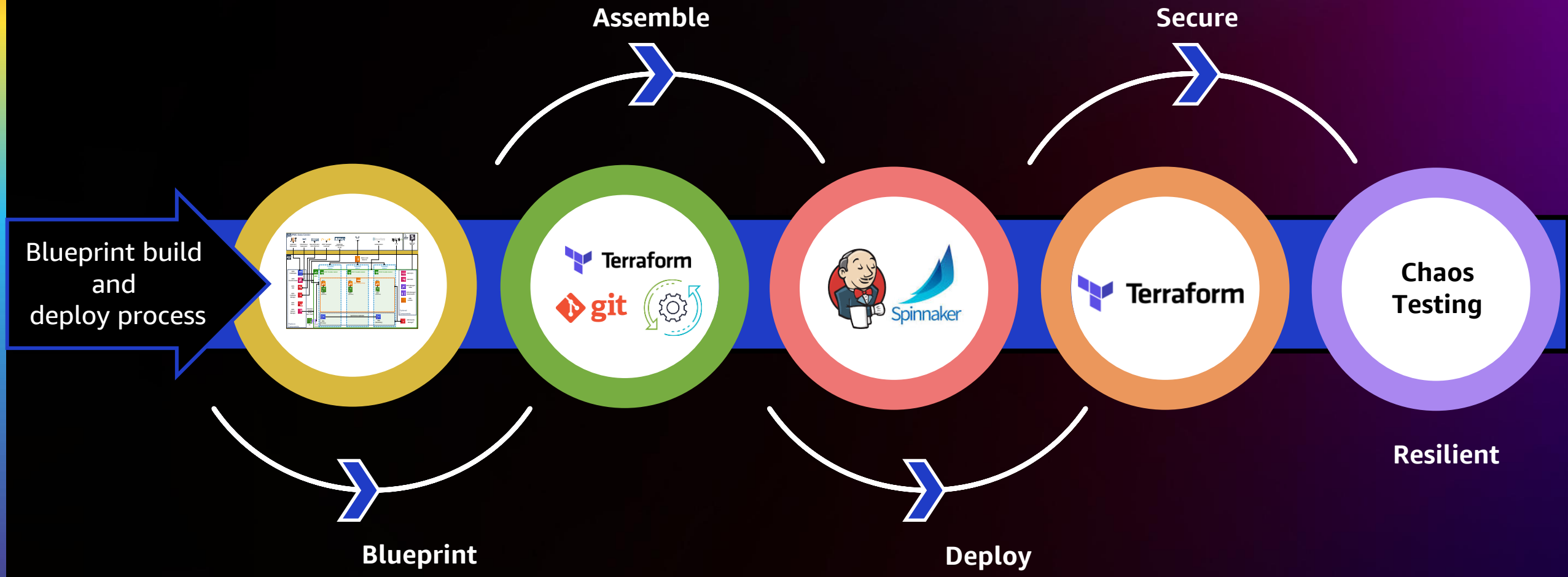


Paging

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Automation



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Automation – The developer view

Service starters using charts/modules

```
# Chart.yaml
apiVersion: v1
description: A Helm chart for the amazing service!
name: awesome-team-amazing-service

#requirements.yaml
dependencies:
  - name: awesome-team-starter
    version: 1.0.51
    repository: https://helm.repos
```

Pipelines as code

```
const environmentSpecificPipeline = {
  name: 'awesome-service',
  stages: sequential(
      terraformApply({
        dir: 'terraform/env/aws/${parameters.cluster}',
        gitRef: '${parameters.imageTag}',
        bitbucketProject: 'awesome-team',
        bitbucketRepo: 'awesome-service'
      }),
      helmApply({
        account: "${awsAccount}",
        ref: 'apply-manifest',
        inputArtifactName: "manifest",
        namespace: "awesome-team"
      }),
      runSmokeTest({
        account: "${awsAccount}"
      })
  )
}
```

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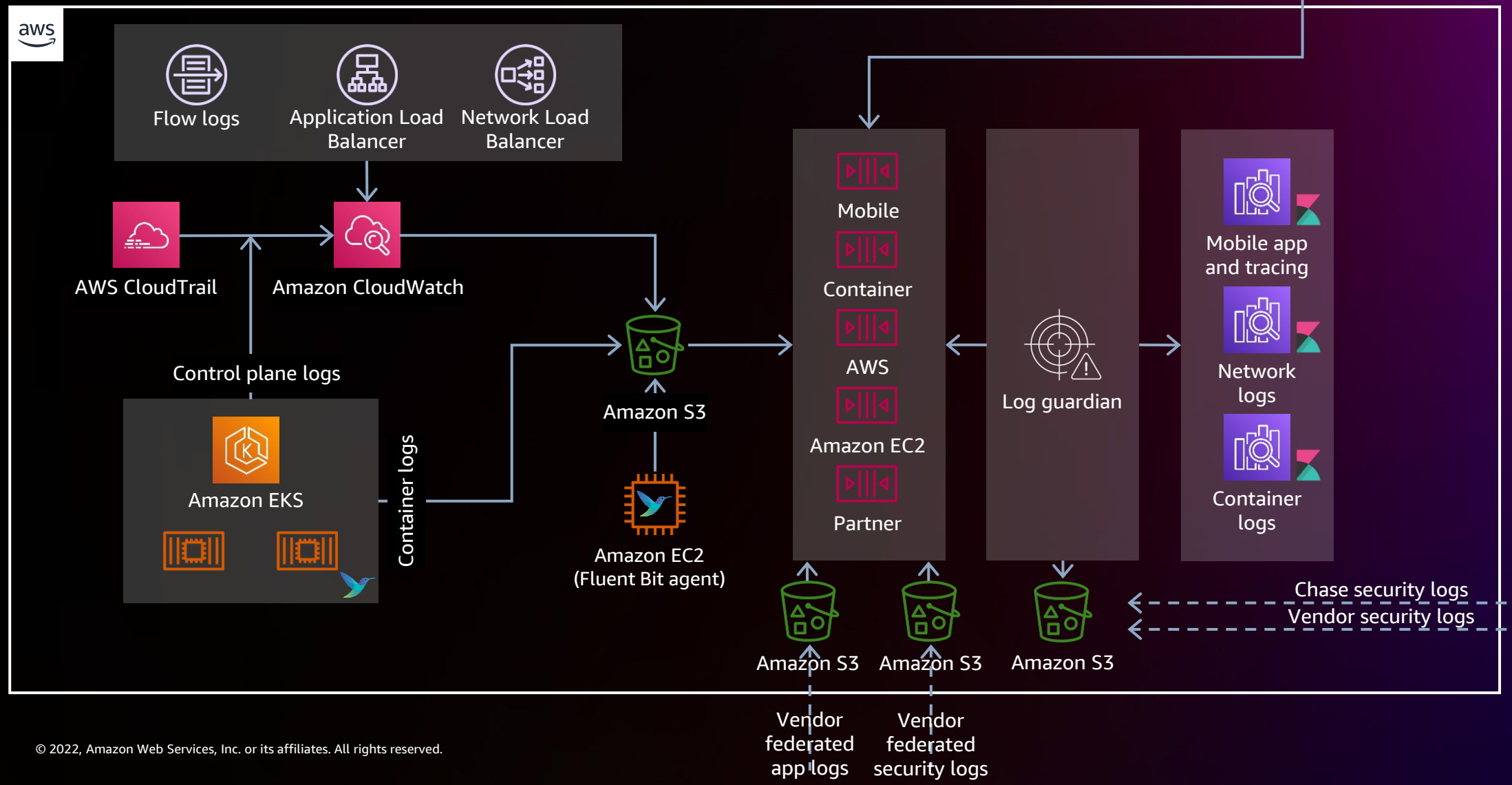
Automation – The developer view

Guardrails

```yaml
apiVersion: constraints.gatekeeper.sh/v1beta1
kind: K8sAllowedRepos
metadata:
  name: image-repos
spec:
  match:
    kinds:
      - apiGroups: [""]
        kinds: ["Pod"]
  parameters:
    repos:
      - "docker.repos"
      - "602401143452.dkr.ecr.{{ .Values.region }}.amazonaws.com"
```

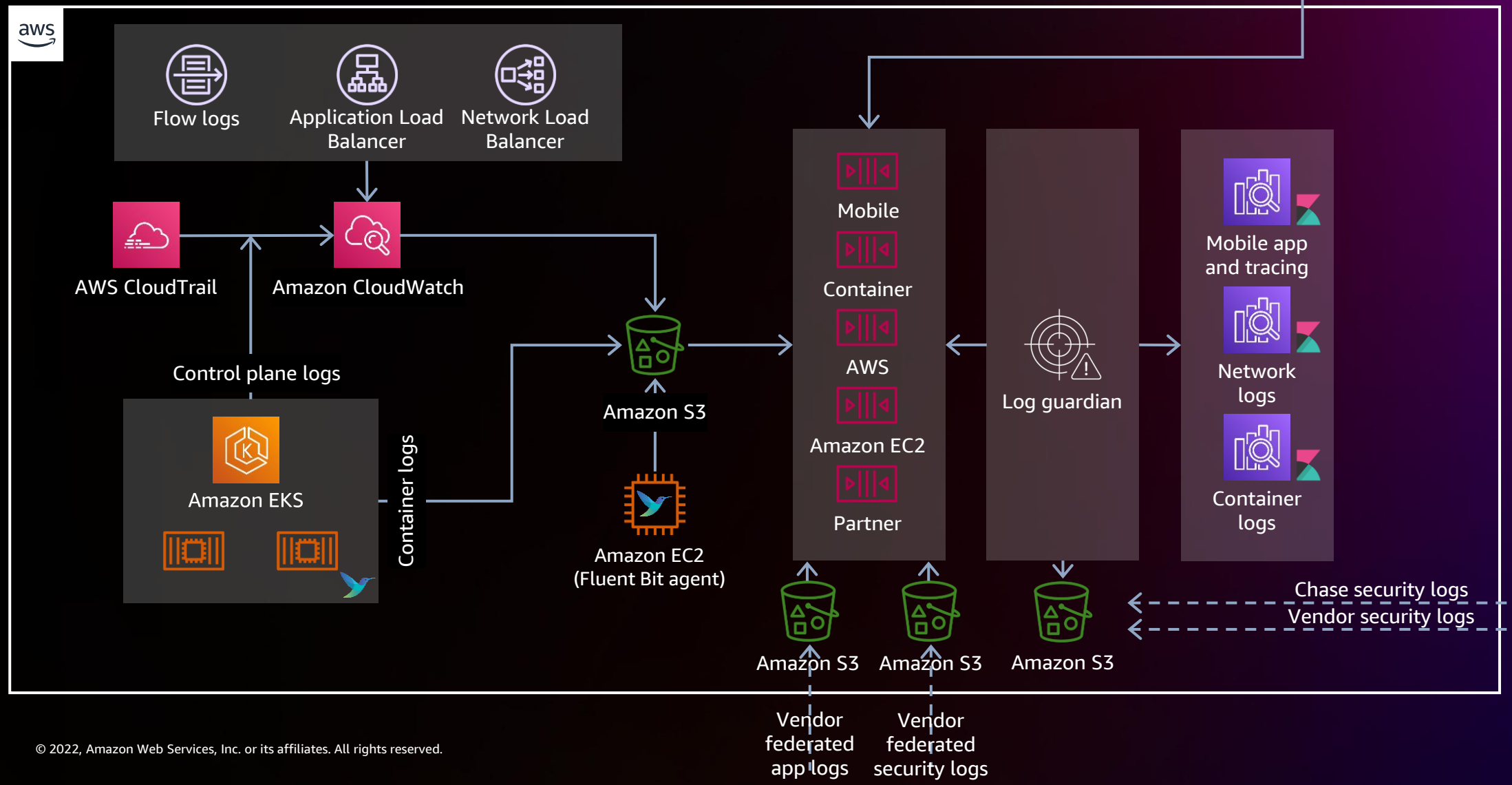
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SRE, monitoring, and observability



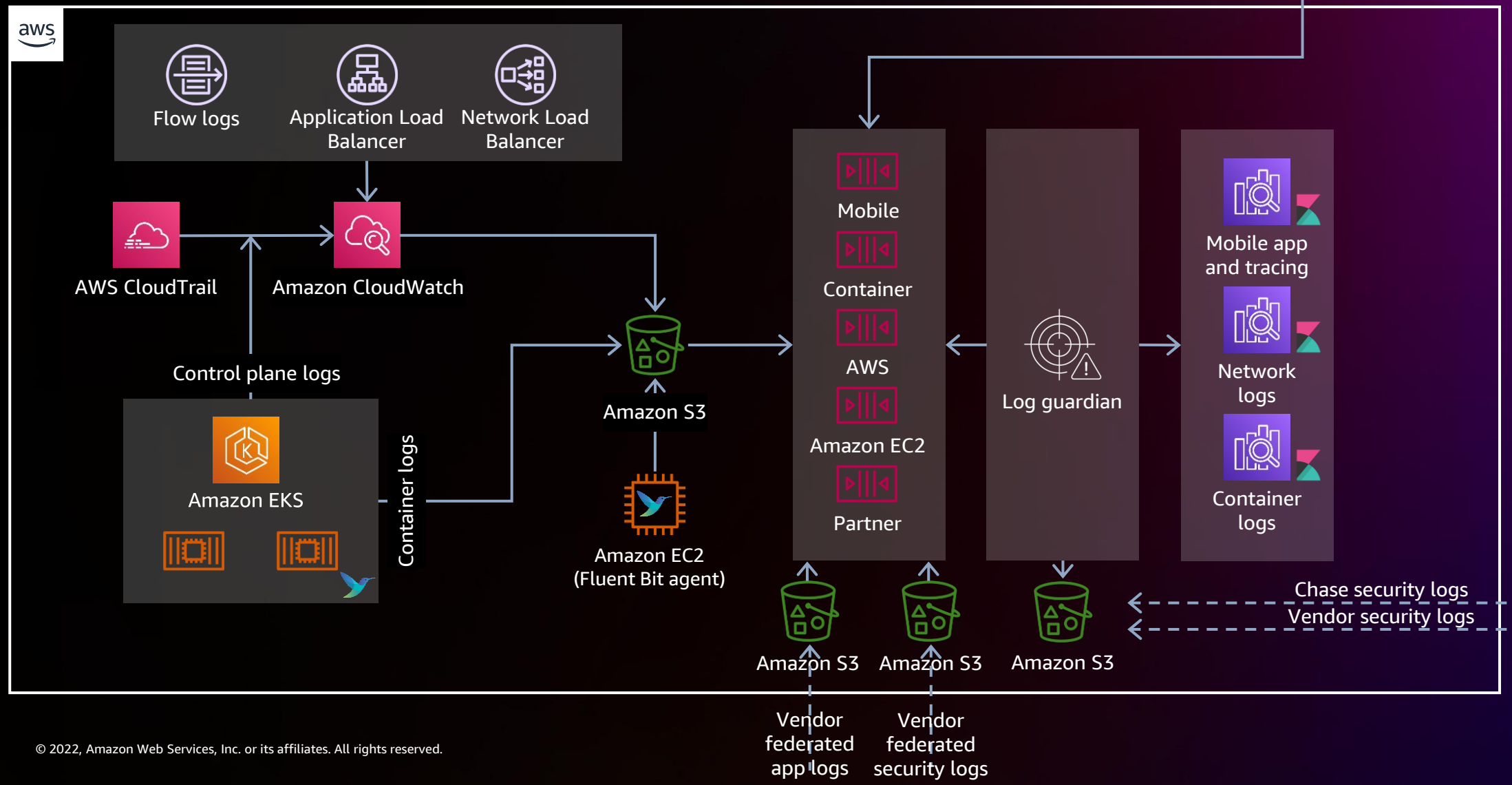
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Event response

- You built it, you run it
- Modeled on law enforcement first response
- Well-maintained runbooks and playbooks
- Exercised response team
- Aggregate, not aggravate
- Blameless culture



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Challenges and key takeaways

- Give teams autonomy
- You will get things wrong along the way – try to make them easy to fix
- Build a culture of self-service
  - There isn’t a team to build it for you
  - There isn’t a team to run it for you
- Deal with the ambiguity of a blank slate
- Apply controls as close as possible to the resource controlled
- Do the hard things first where you can
- Don’t build a ship without a shipyard

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Thank you!

Paul Clark
paul.clark@jpmorgan.com

Courtney de Lautour
courtney.delautour@jpmorgan.com

Colin Marden
cmarden@amazon.co.uk



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