Taming the Hybrid Beast: How Somos Keeps us all Connected

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About Electric Cloud:

Electric Cloud's Adaptive Release Orchestration (ARO) platform helps organizations like SOMOS, Edward Jones, TIAA, E*TRADE, HPE, Intel and Lockheed Martin confidently release new applications and adapt to change at any speed demanded by the business, with the analytics and insight to measure, track, and improve their results. We are focused in on helping teams <u>Release on Business Demand</u> and <u>Eliminate Release Anxiety</u>!
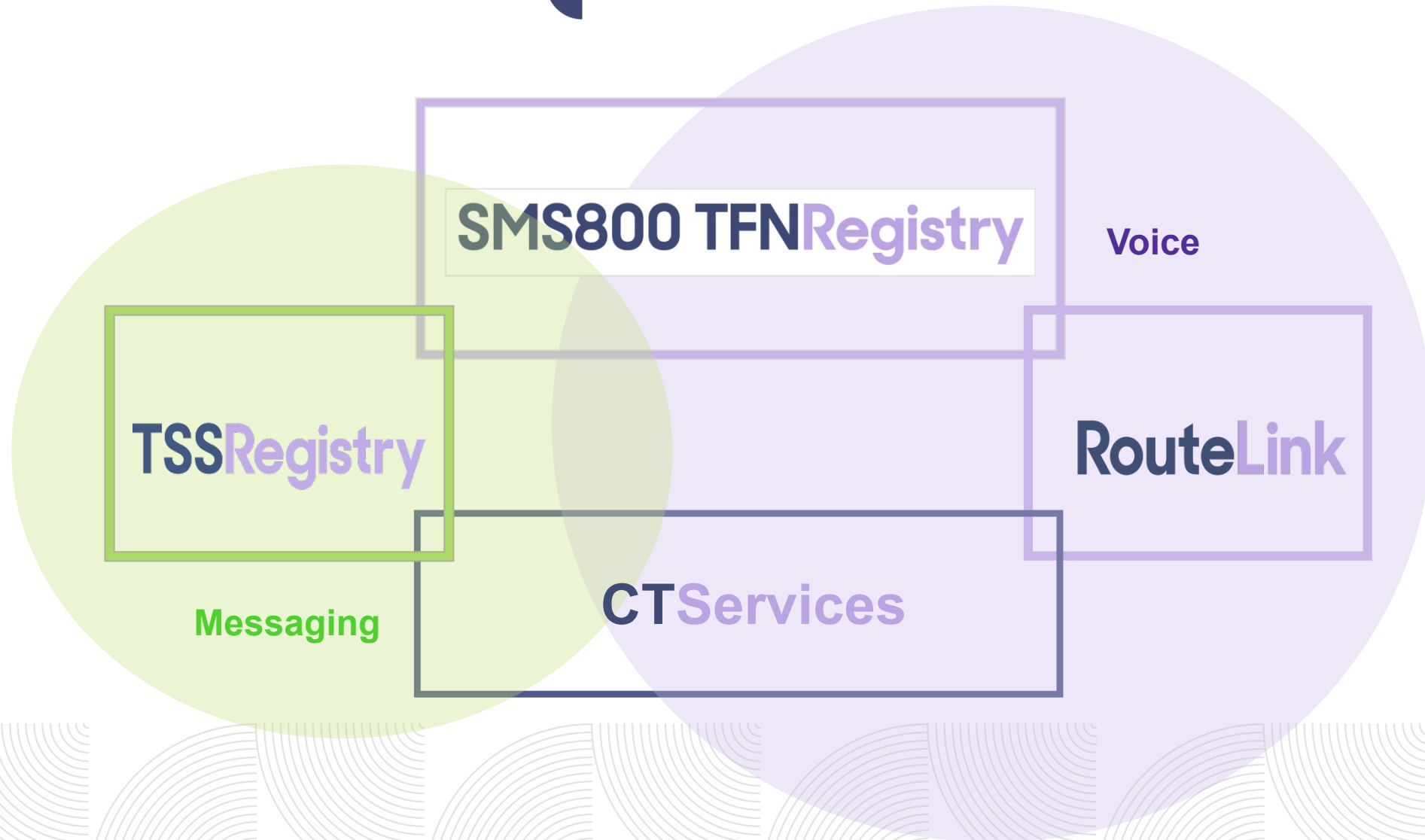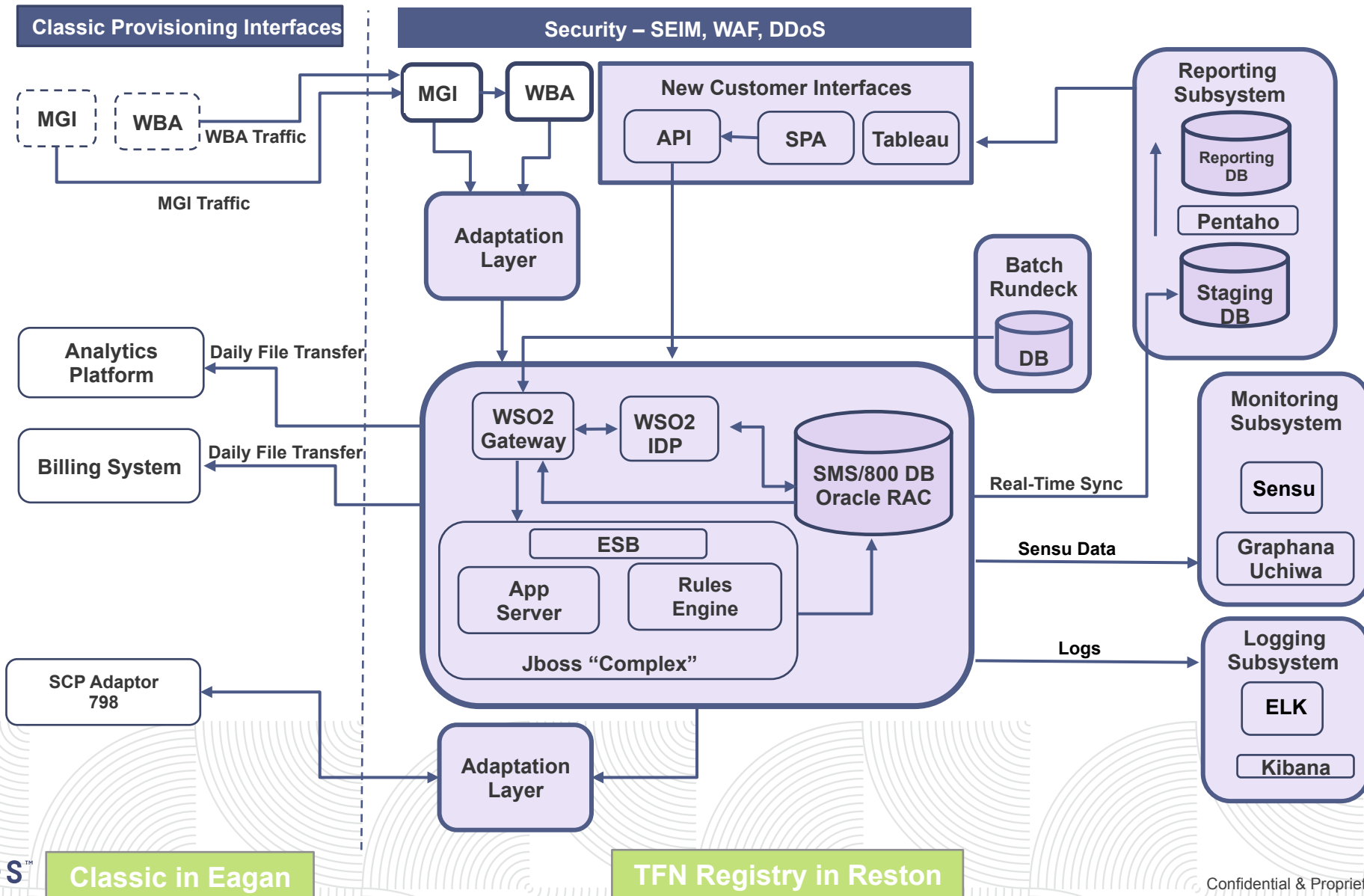
About SOMOS:

Somos is an innovative company that focuses on advanced service registries and related products and services. Our registries include intuitive user interfaces that place data and the power of decision making into the hands of enterprises globally. Our customer obsessed culture is reflected in everything we do. It fuels our strategy, our collaborative approach towards working with the industry, and our creative solutions for customer problems.
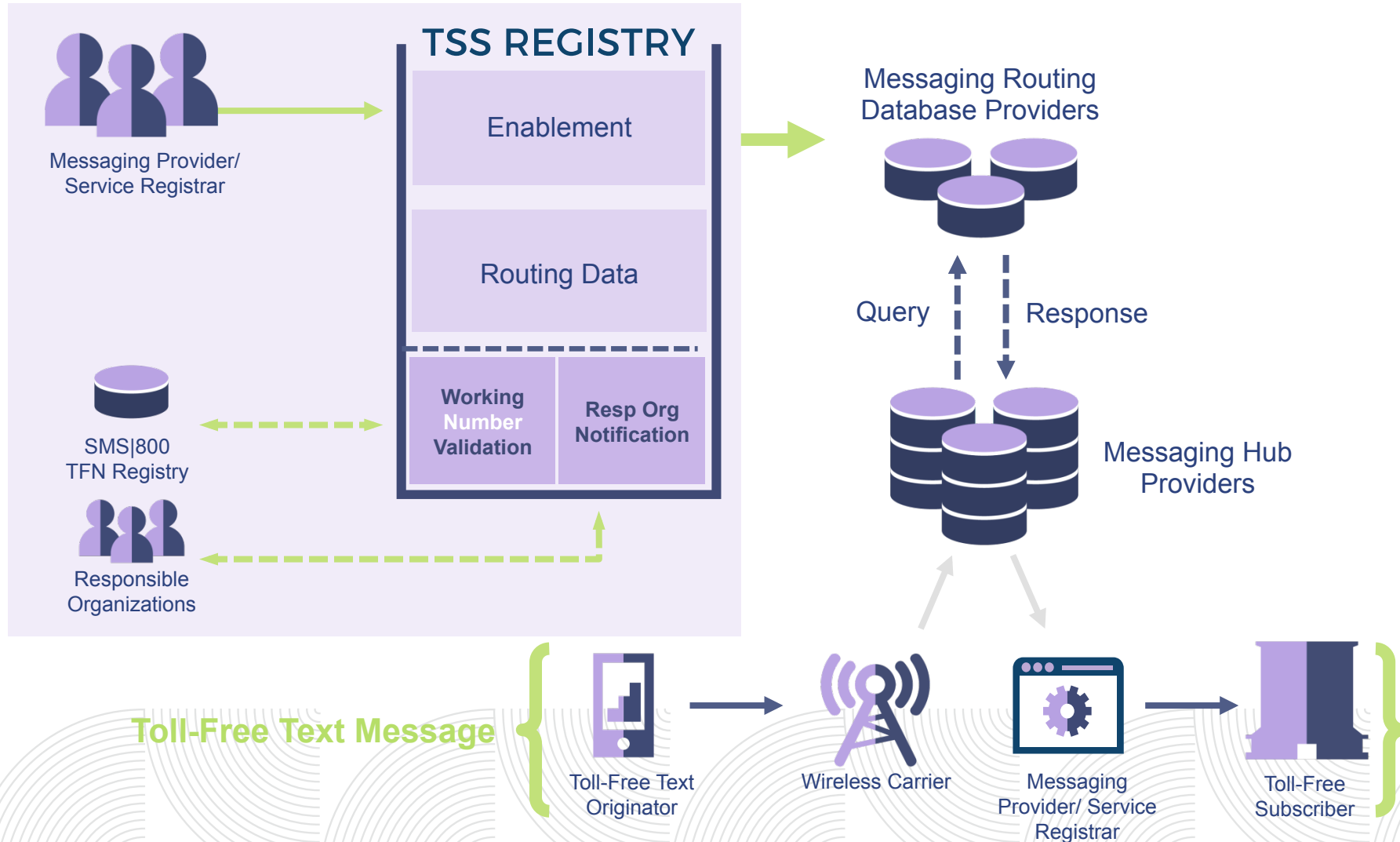
SOMOS®

- Manage over <u>41 Million</u> Toll-Free Numbers
- Holder of the FCC SMS/800 Functions Tariff
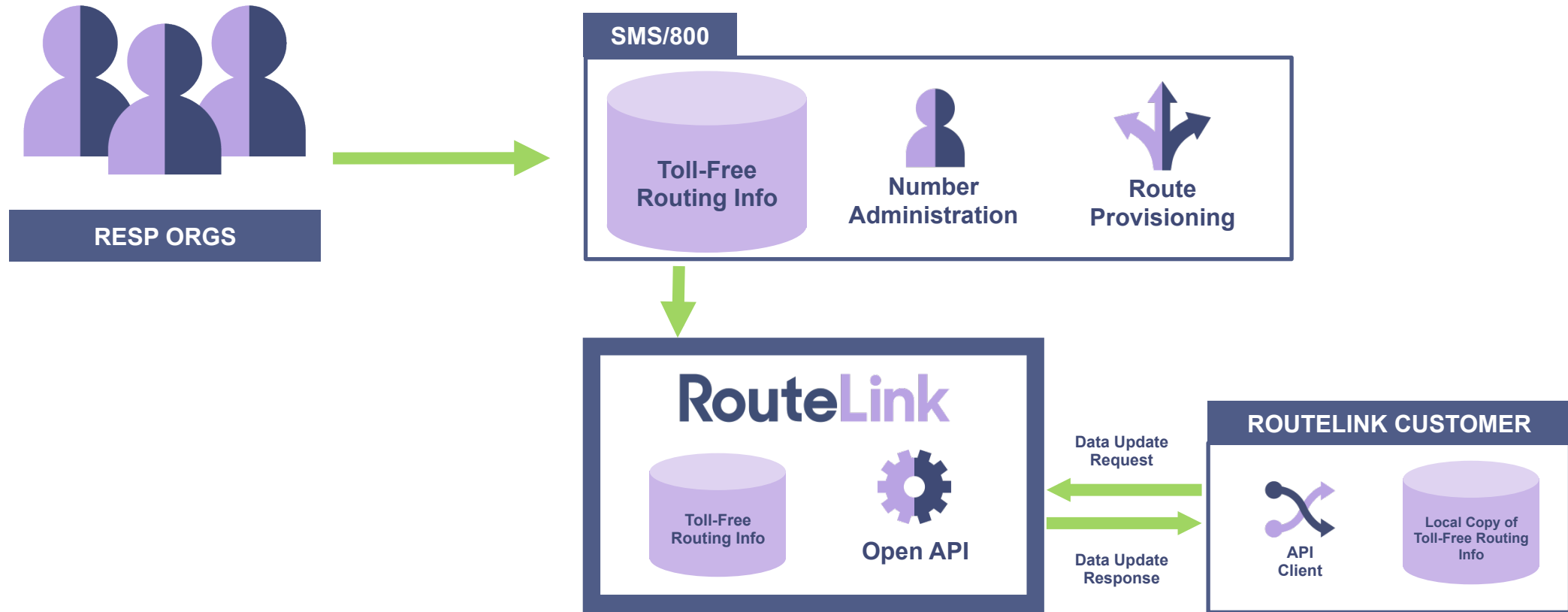- Expanding to Texting and Smart Services
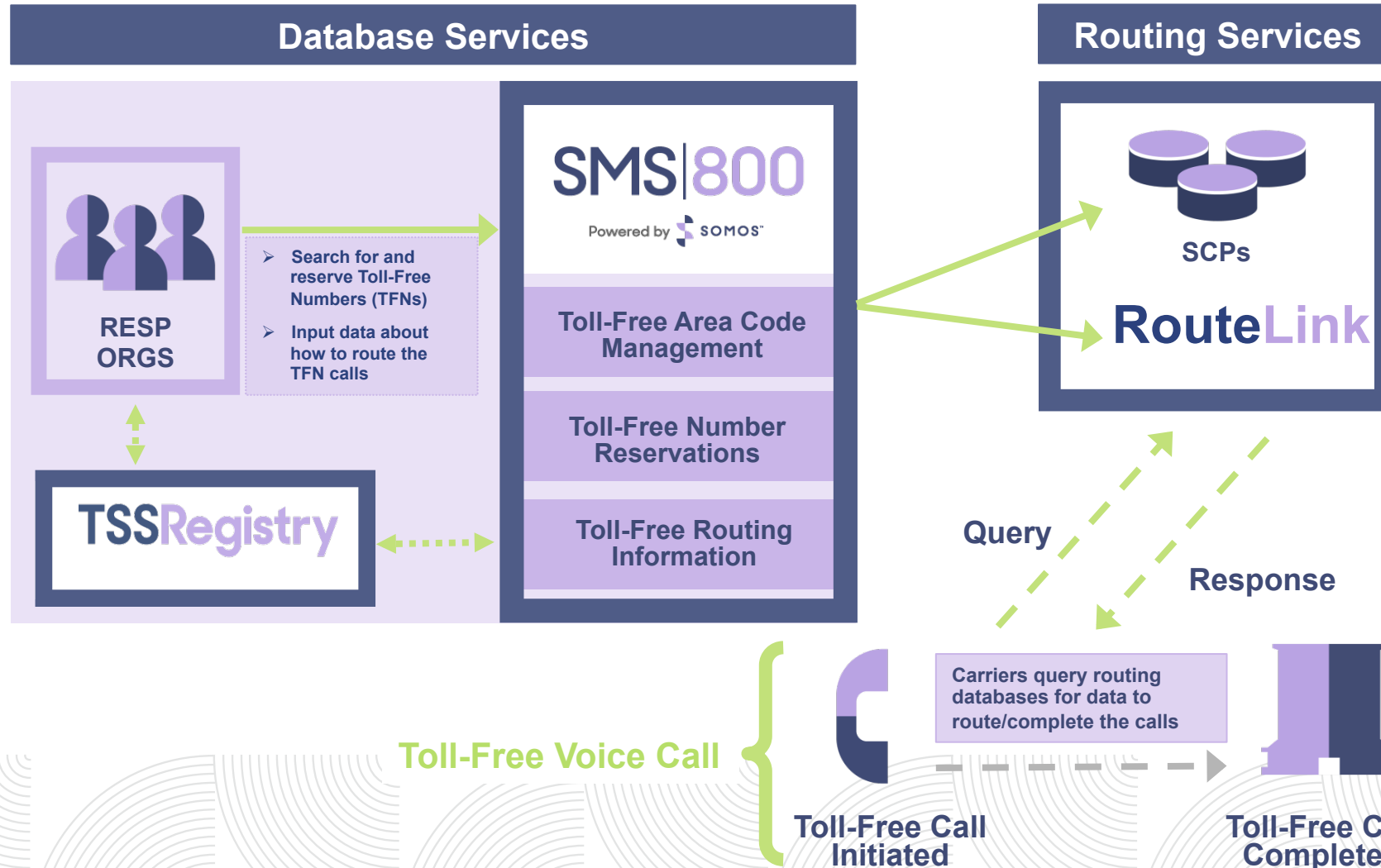
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SOMOS™

SMS800 TFNRegistry

Voice

TSSRegistry

RouteLink

Messaging

CTServices

SMS800 TFNRegistry

Classic Provisioning Interfaces

Security – SEIM, WAF, DDoS

MGI

WBA

MGI → WBA

WBA Traffic

MGI Traffic

New Customer Interfaces

API ← SPA · Tableau

Reporting Subsystem

Reporting DB

Pentaho

Staging DB

Adaptation Layer

Batch Rundeck

DB

Analytics Platform

Daily File Transfer

Billing System

Daily File Transfer

WSO2 Gateway ↔ WSO2 IDP

SMS/800 DB Oracle RAC

ESB

App Server · Rules Engine

Jboss "Complex"

Real-Time Sync

Monitoring Subsystem

Sensu

Graphana Uchiwa

Sensu Data

SCP Adaptor 798

Adaptation Layer

Logs

Logging Subsystem

ELK

Kibana

Classic in Eagan

TFN Registry in Reston

SOMOS™

Confidential & Proprietary Information of Somos, Inc.

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TSSRegistry

TSS REGISTRY

- Messaging Provider/ Service Registrar
- Enablement
- Routing Data
- Working Number Validation
- Resp Org Notification
- SMS|800 TFN Registry
- Responsible Organizations

Messaging Routing Database Providers

Query   Response

Messaging Hub Providers

Toll-Free Text Message

- Toll-Free Text Originator
- Wireless Carrier
- Messaging Provider/ Service Registrar
- Toll-Free Subscriber

RouteLink

Diagram: RESP ORGS → SMS/800 (Toll-Free Routing Info, Number Administration, Route Provisioning) → RouteLink (Toll-Free Routing Info, Open API) ↔ ROUTELINK CUSTOMER (API Client, Local Copy of Toll-Free Routing Info)

- Data Update Request
- Data Update Response

➢ **Data provided includes TFN Routing Information and Resp Org ID**

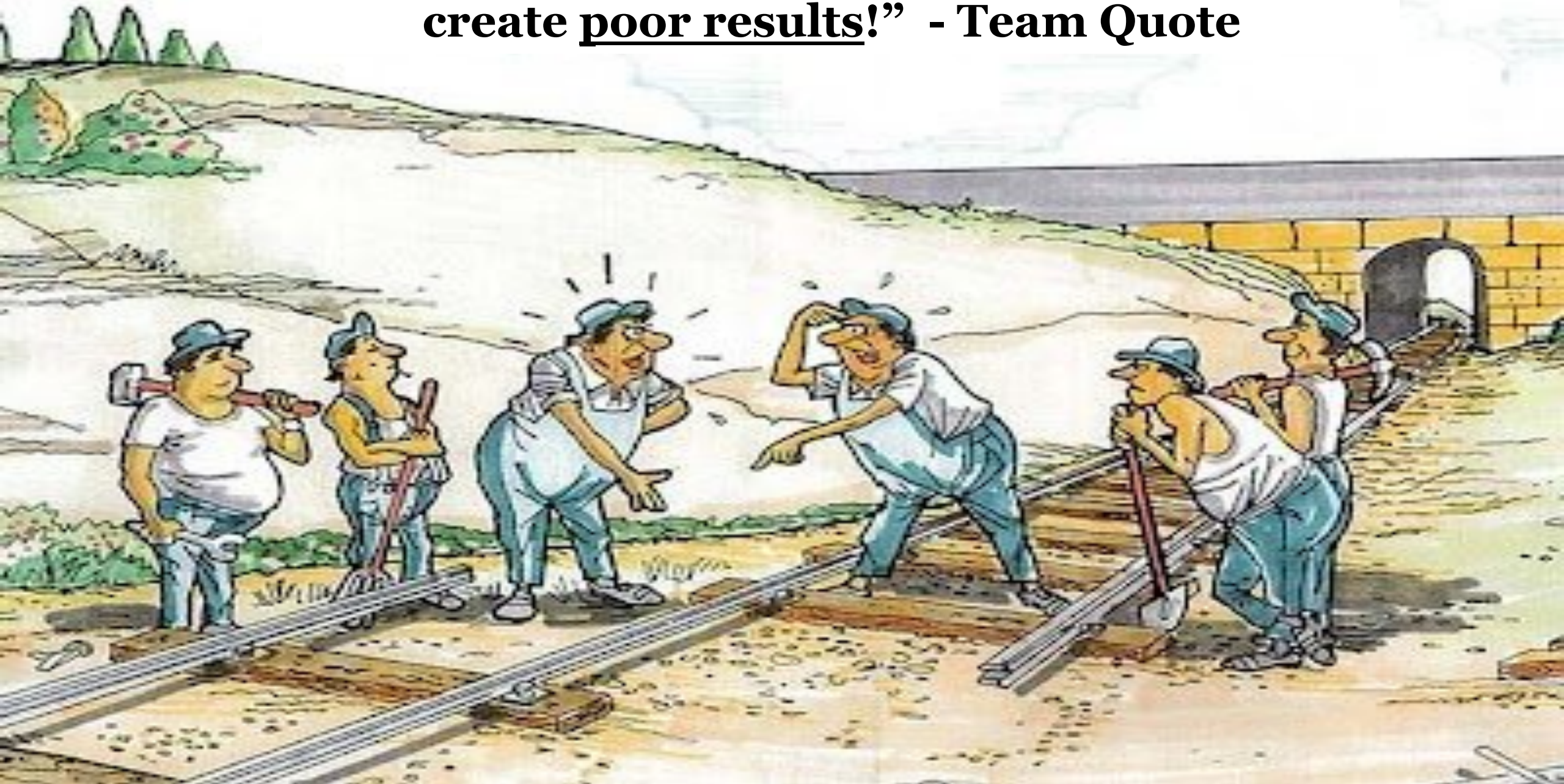➢ **Data set will expand to include Alternate Carrier Info, IP Addresses and other data**

Situation and Business Impact

- Business not able to respond to market demands or opportunities
  - 30-year old mainframe application
  - 12+ hour deployments with 30-40 people
  - Mindset and processes impeded agility, quality

- Not a future-proofed solution
  - Already difficult to add new features
  - Impending retirements
  - Increasing demand
  - Increasing costs
  - Not enough time for QA, customer satisfaction

"Great people working within poor systems create poor results!" - Team Quote

Moving off the Mainframe

- Multiple project with different technology stacks
- Cloud, Data Center, and on-premise environments
- Migration from Mainframe technology (and mentality ☺) to Microservices applications
- Large contractor teams to manage
- Lots of software tools that are disconnected
- Ongoing operations MUST be maintained

Architecting the RIGHT solution

- First Things First, BUILD TRUST!
    - Lunch & Learn Sessions
    - Work hand-in-hand with Ops Teams
    - Train Dev, QA, & Ops on the DevOps Process
- De-compose mainframe/legacy → Microservices
- Re-engineer / Merge processes
- Provide standard AWS environments
- Provide oversight of DevOps / Cloud Vendors
- Collect & share deployment and release metrics

Loosely coupled architectures and teams are the strongest predictor of continuous delivery.

The Puppet Labs/DORA State of DevOps Report
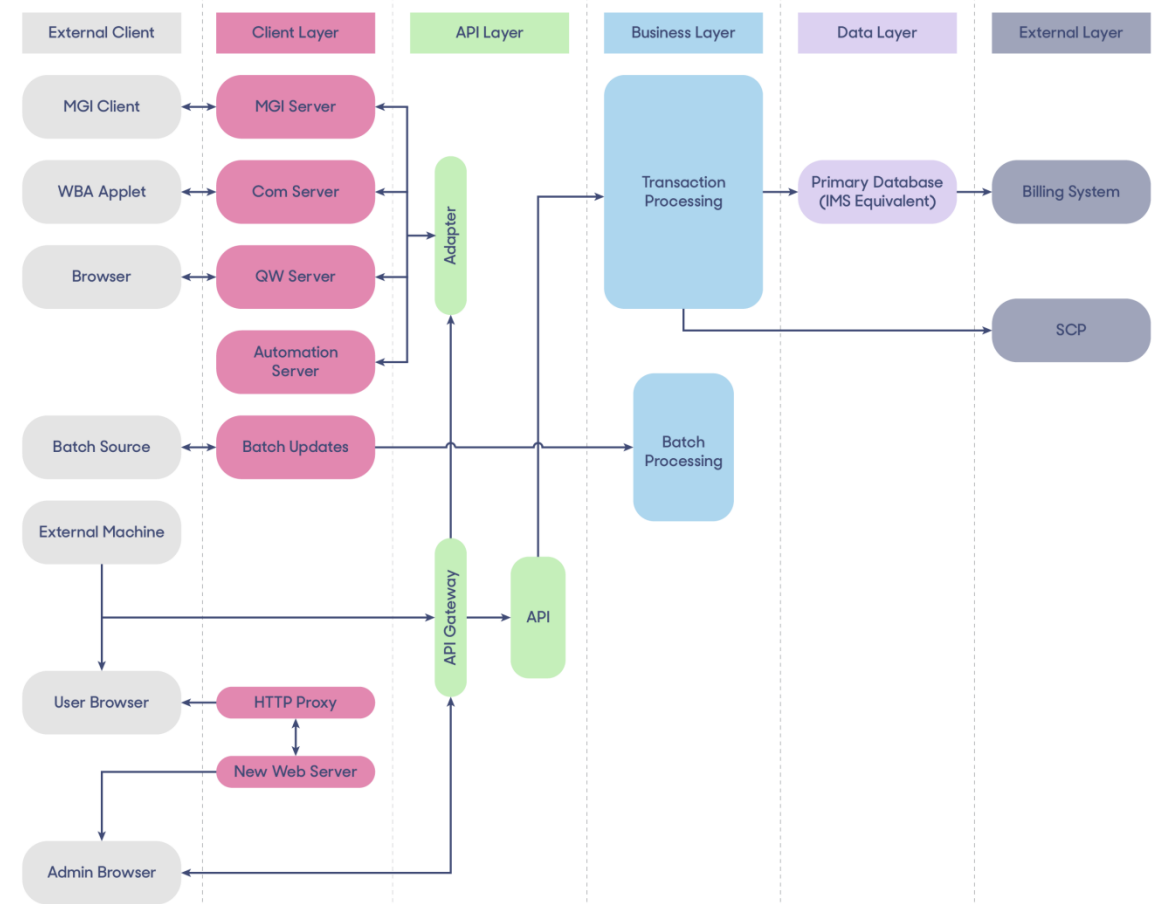
Architecting the RIGHT solution (cont.)

- Gather and inventory what we have
- Collect & share deployment and release metrics
- Create a **SOMOSian DevOps Framework**
  - Make DevOps work for us!
  - Feed and Grow the DevOps Culture
- Integrate the DevOps Tool chain
  - Remove tools no longer needed
  - Integrate the remaining tools (this is where ElectricFlow® was helpful)
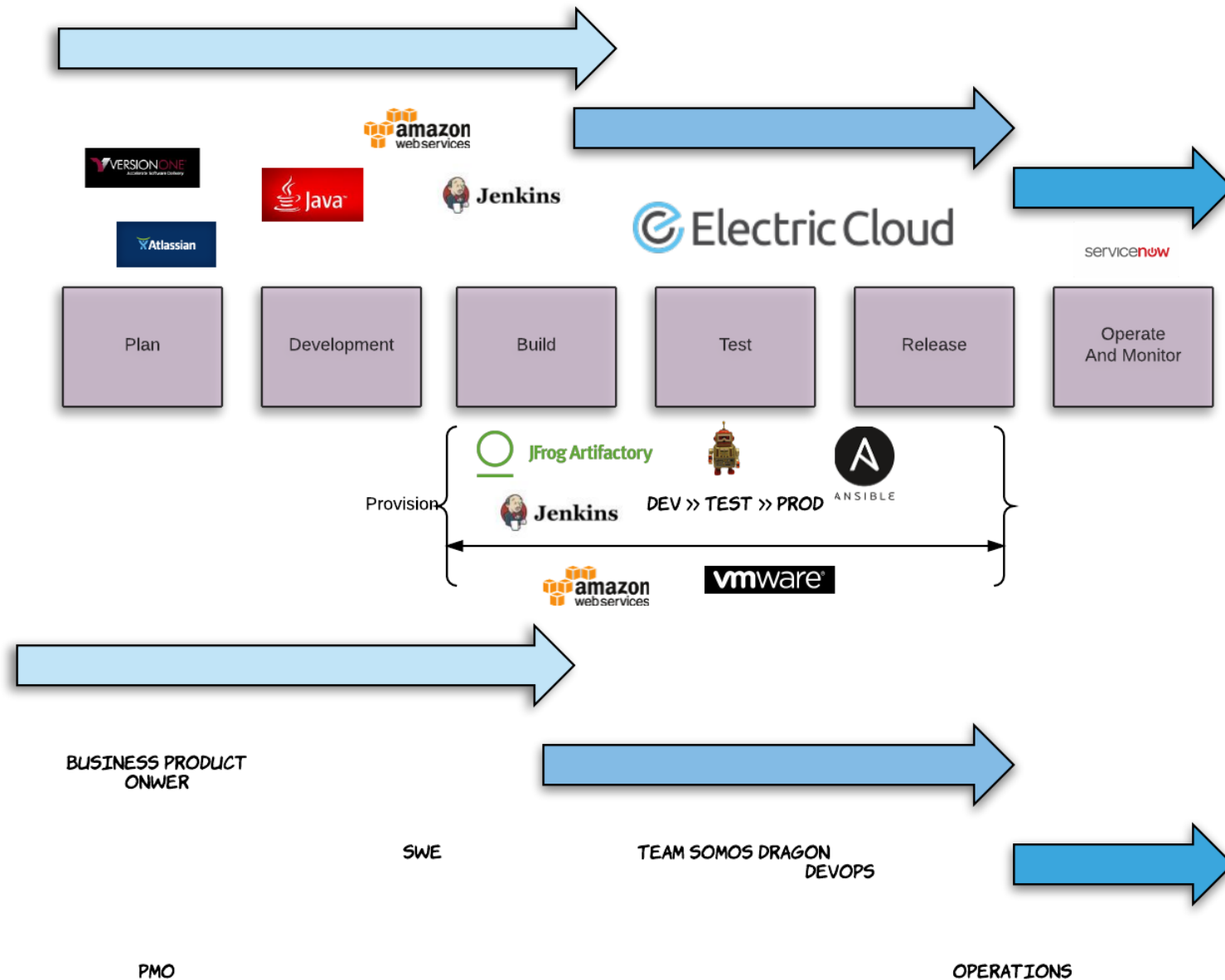- TTM (Train, Track, and Manage)

Deployment frequency is THE indicator for success and deployment pain is a predictor of failure.

The Puppet Labs/DORA State of DevOps Report

Goals

- "Abstract away" the mainframe interfaces

- Create a bridge from Mainframe to DevOps Culture

- Provide Approved Automation as a Service

- "Unclog" the pipeline to accelerate release

Plan | Development | Build | Test | Release | Operate And Monitor

Provision: JFrog Artifactory, Jenkins, DEV » TEST » PROD, ANSIBLE, amazon webservices, vmware

BUSINESS PRODUCT ONWER

SWE

TEAM SOMOS DRAGON DEVOPS

PMO

OPERATIONS
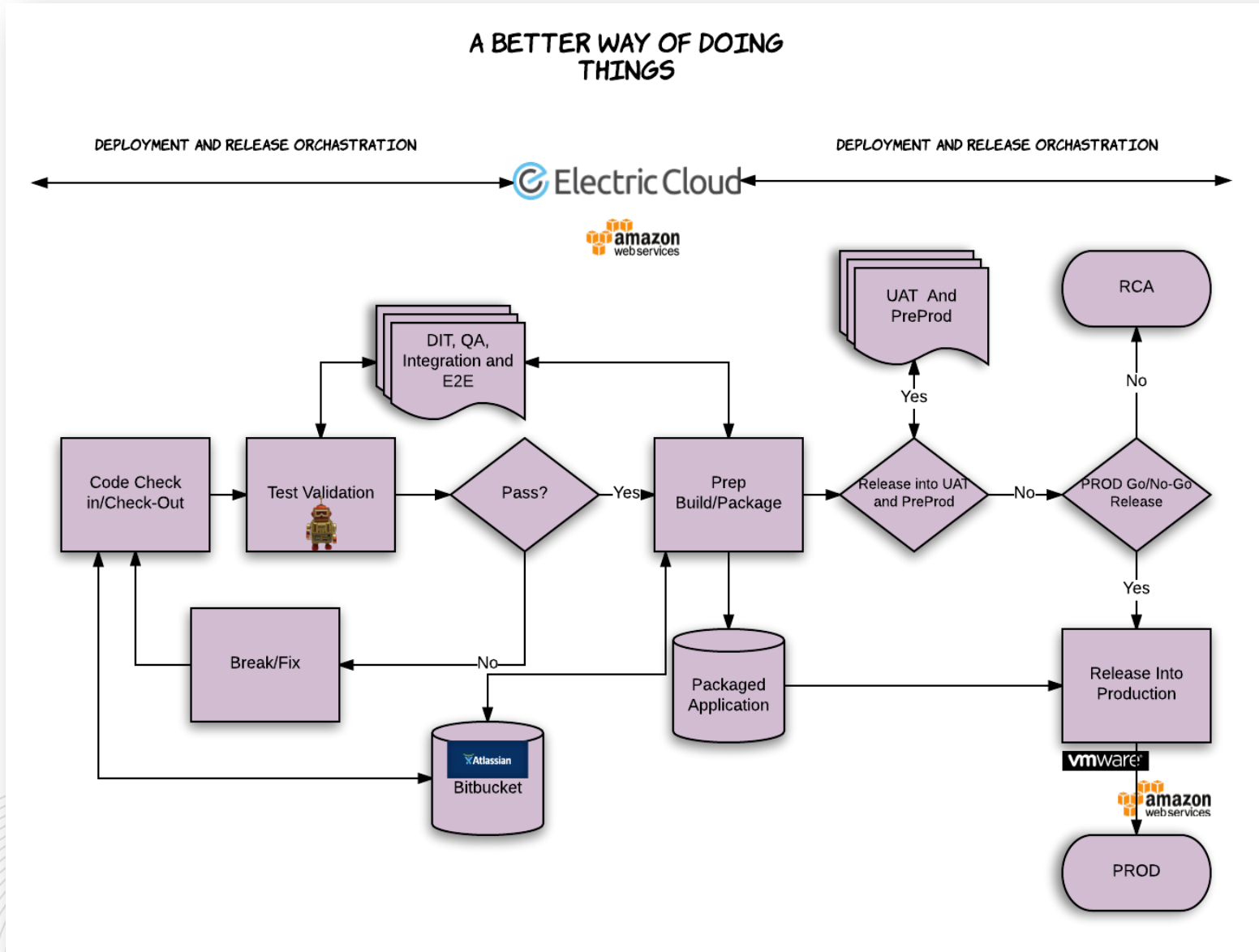
Outcomes

More Responsive to market

- Releases: **36 hr → 1 hr**
- Deploy: **12 hr → 20 minutes**

Less reliant on 3rd party vendors

- Better cost optimizations
- Converge teams, tools, process on "DevOps path" via ElectricFlow® pipelines

Enable new customer value

- Expanded to Texting & Smart Services, Routing Services

A BETTER WAY OF DOING THINGS

Results so far…

- Reduction of static environments
- Environments can be created on demand via pipelines
- From 30 Deployments per day to 50. Goal is 100 by End of Year
- Shorter Release Cycles
- Fail Faster
- Reduced Time to Market
- Pushed DevOps to the Teams via ElectricFlow® Pipelines
- Better Cost Optimizations

Thank you.