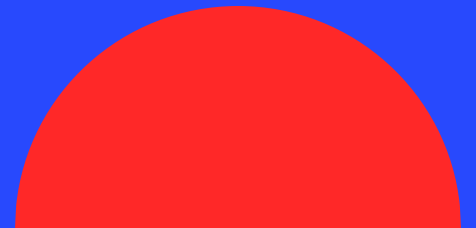
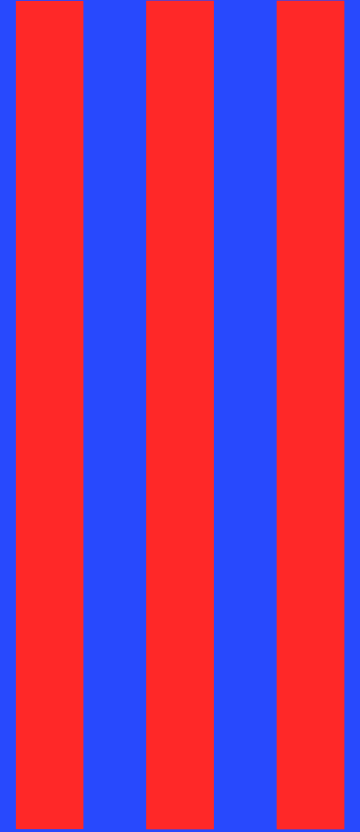


Cloud Architecture



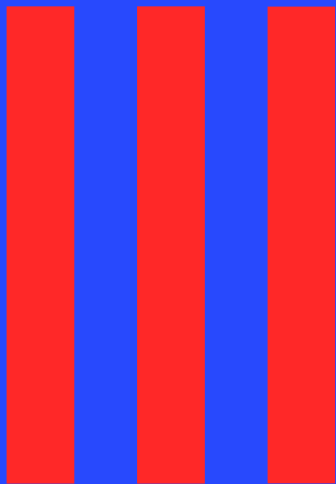
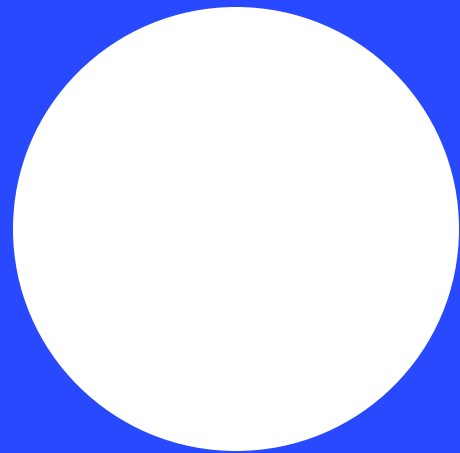
AWS well-articulated framework

- Provides guidance for building infrastructures that are well-evaluated
- There are 6 pillars that you should take into consideration when structuring your infrastructure



5 well-articulated pillars

Operational excellence pillar



Operational Excellence pillar

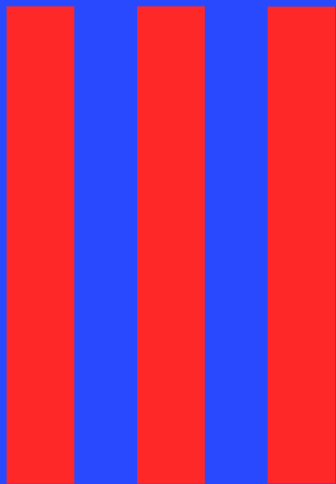
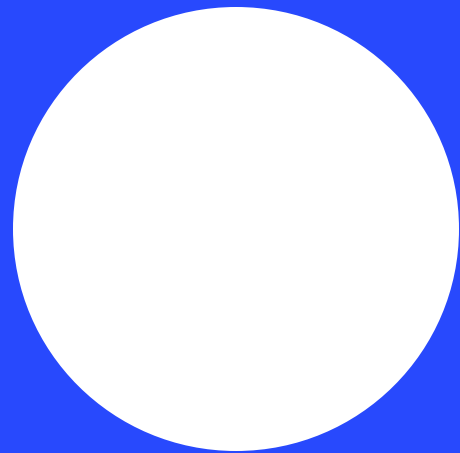


Deliver
business
value

- Operational Excellence pillar
 - Runs systems to deliver business values
 - Automatic changes and responds to events
 - Performs operations as codes
 - Makes small changes at a time

5 well-articulated pillars

Security Pillar



Security pillar

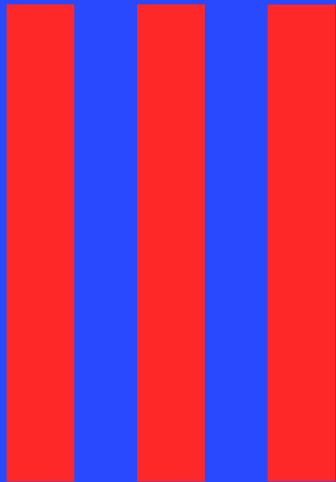
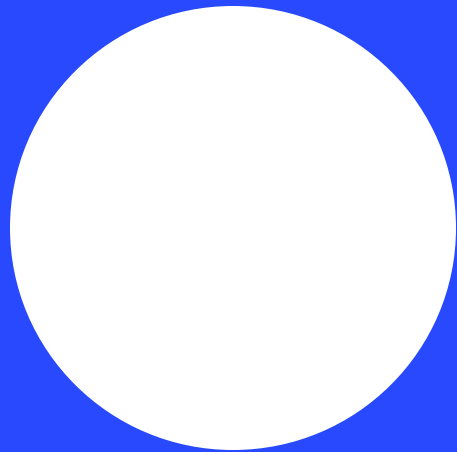


Protect and
monitor
systems

- Helps protect information, systems, and assets
- Identifies who can do what
- Establishes control to detect security
- Allows you to apply security to all layers
- Protects data in transit and at rest
- Adds strong identity foundation

5 well-articulated pillars

Reliable pillar



Reliability pillar

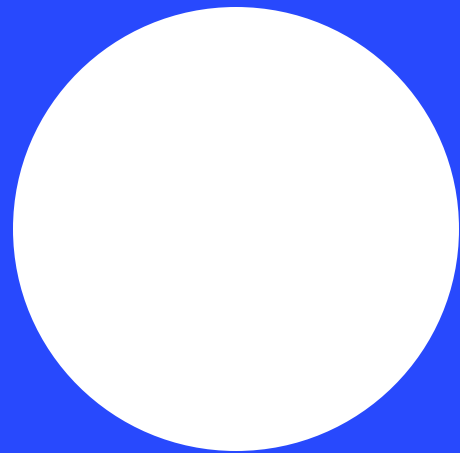


Recover
from failure
and mitigate
disruption.

- Helps recover from failure and migrates disruptions
- Handles changes
- Ensures that workloads perform its intended functions
- Helps design distributed systems
- Test recovery procedures
- Allows you to manage changes automatically

5 well-articulated pillars

Performance Efficiency Pillar



Performance Efficiency pillar

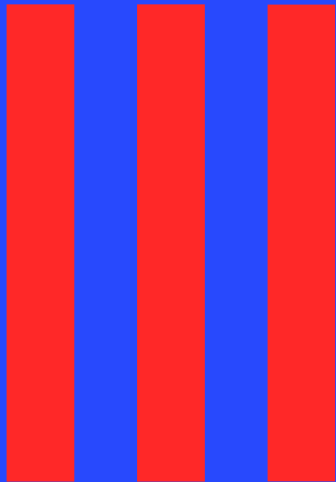
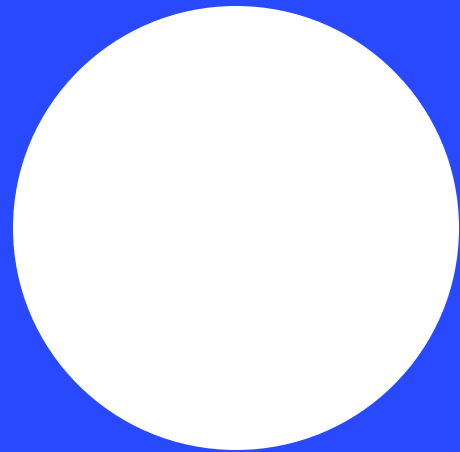


Use
resources
sparingly.

- Helps use IT resources efficiently and sparingly
- Helps meet systems requirements and change demands
- Monitors performance
- Helps select the right resources based on workload
- Uses serverless architecture

5 well-articulated pillars

Cost Optimization Pillar



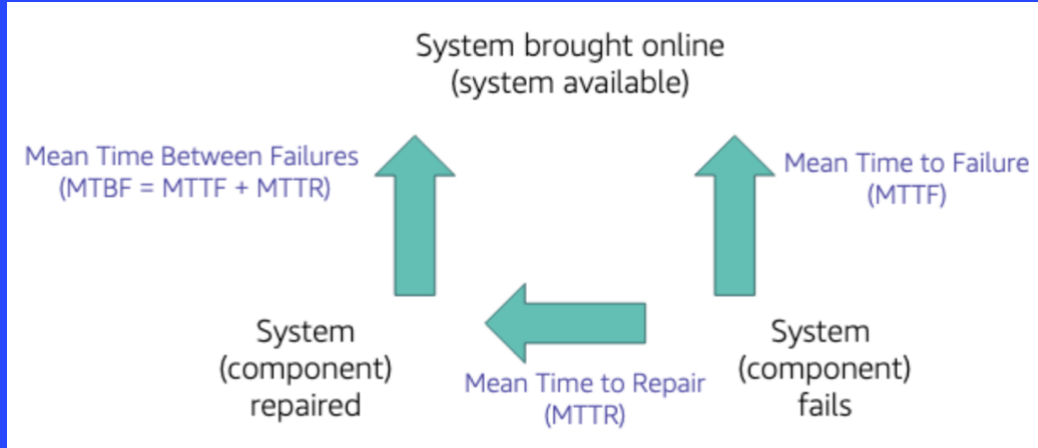
Cost Optimization pillar



Eliminate
unneeded
expense.

- Avoids unnecessary cost
- Helps understand and control spendings
- Analyzes spendings over time
- Helps select the right number of resources for your company
- Measures overall efficiency
- Implement Cloud Financial Mangment

Reliability



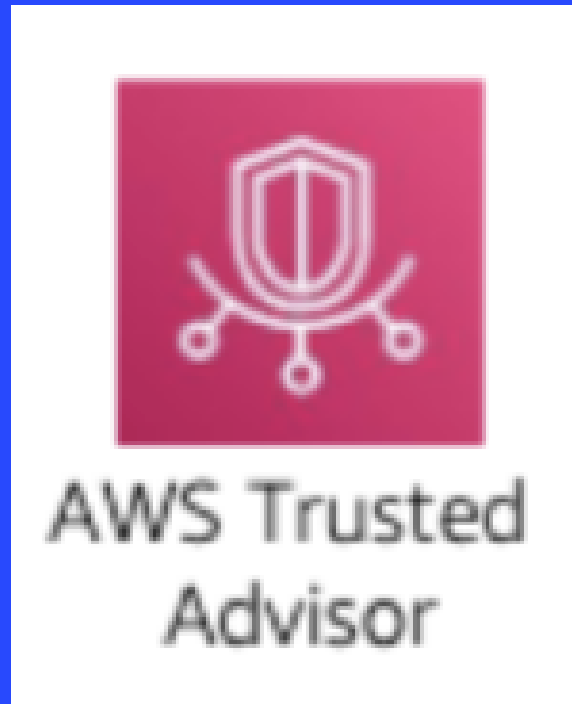
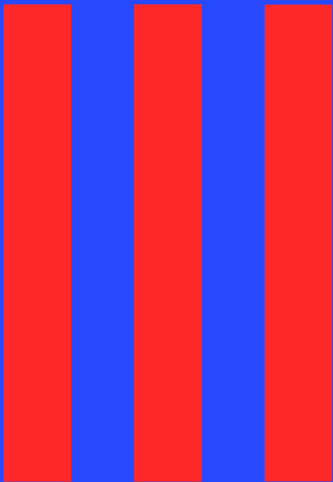
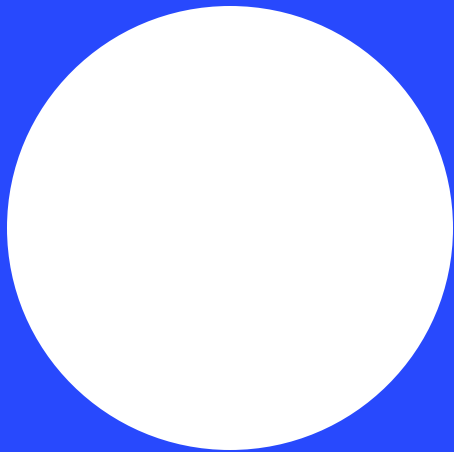
- Reliability is a measurement of your systems functionality
- System includes all system components
- Mean time between failures (MTBF) total time in service/ number of failures
- Mean time to repair (MTTR) how long it takes to repair system
- Mean time to failure (MTTF) length of time the application is available

Availability

- Normal operation time
- Percentage of uptime/ overtime
- Percentage of time that a system operates normally
- High availability is when a system can withstand some measures of degradation while still remaining available
- Minimal human intervention is required
- Availability tiers can vary and its based on the length of disruption is acceptable

Availability	Max Disruption (per year)	Application Category
99%	3 days 15 hours	Batch processing, data extraction, transfer, and load jobs
99.9%	8 hours 45 minutes	Internal tools like knowledge management, project tracking
99.95%	4 hours 22 minutes	Online commerce, point of sale
99.99%	52 minutes	Video delivery, broadcast systems
99.999%	5 minutes	ATM transactions, telecommunications systems

AWS Trusted Advisor



- Online tool that guides you to provision your resources
- Looks at your entire AWS environment and give you recommendations in 5 categories
- Cost Optimization, Performance, Security, Fault Tolerance, Service Limits