Cloud Architecture:
When and How to go Cloud

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2018 Cloud Shift Trends

	2018	2019	2020	2021	2022
System infrastructure	11%	13%	16%	19%	22%
Infrastructure software	13%	15%	17%	18%	20%
Application software	34%	36%	38%	39%	40%
Business process outsourcing	27%	28%	29%	29%	30%
TOTAL	**19%**	**21%**	**24%**	**26%**	**28%**

SYNERC⌂MM

2019 Cloud Spending Trends

	2018	2019	2020	2021	2022
Cloud Business Process Services (BPaaS)	45.8	49.3	53.1	57	61.1
Cloud Application Infrastructure Services (PaaS)	15.6	19	23	27.5	31.8
Cloud Application Services (SaaS)	80	94.8	110.5	126.7	143.7
Cloud Management and Security Services	10.5	12.2	14.1	16	17.9
Cloud System Infrastructure Services (IaaS)	30.5	38.9	49.1	61.9	76.6
Total Market	**182.4**	**214.3**	**249.8**	**289.1**	**331.2**

Source: Gartner (April 2019) * in billions USD

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Do you cloud?

When?

- How long will the application(s) be in service?
  - Will it see user growth?
  - How will staffing needs be met for the tech stack?
- Will your application(s) see future development efforts?
  - Maintenance mode vs new features mode
- Are there other applications that share its architecture?

Well-Architected Framework

Operational Excellence

- ✓ Perform Ops as Code
- ✓ Use Annotated Docs
- ✓ Frequent small changes
- ✓ Refine Ops procedure often
- ✓ Anticipate Failure
- ✓ Learn from failures

Security

- ✓ Use Identity Foundations
- ✓ Enable Traceability
- ✓ Security at all layers
- ✓ Automate Best Practices
- ✓ Protect data in transit and rest
- ✓ Prepare for events

Reliability

- ✓ Start at networking layer
- ✓ Strong Foundations
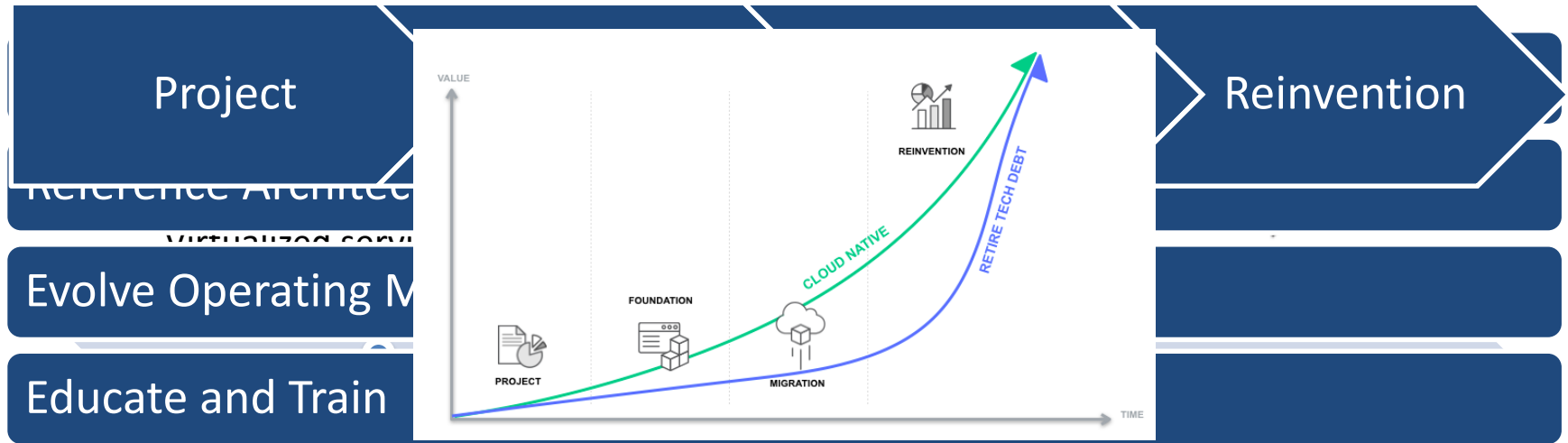- ✓ App design for HA
- ✓ Implement to availability goals

Performance Efficiency

- ✓ Democratize advanced technologies
- ✓ Global in minutes
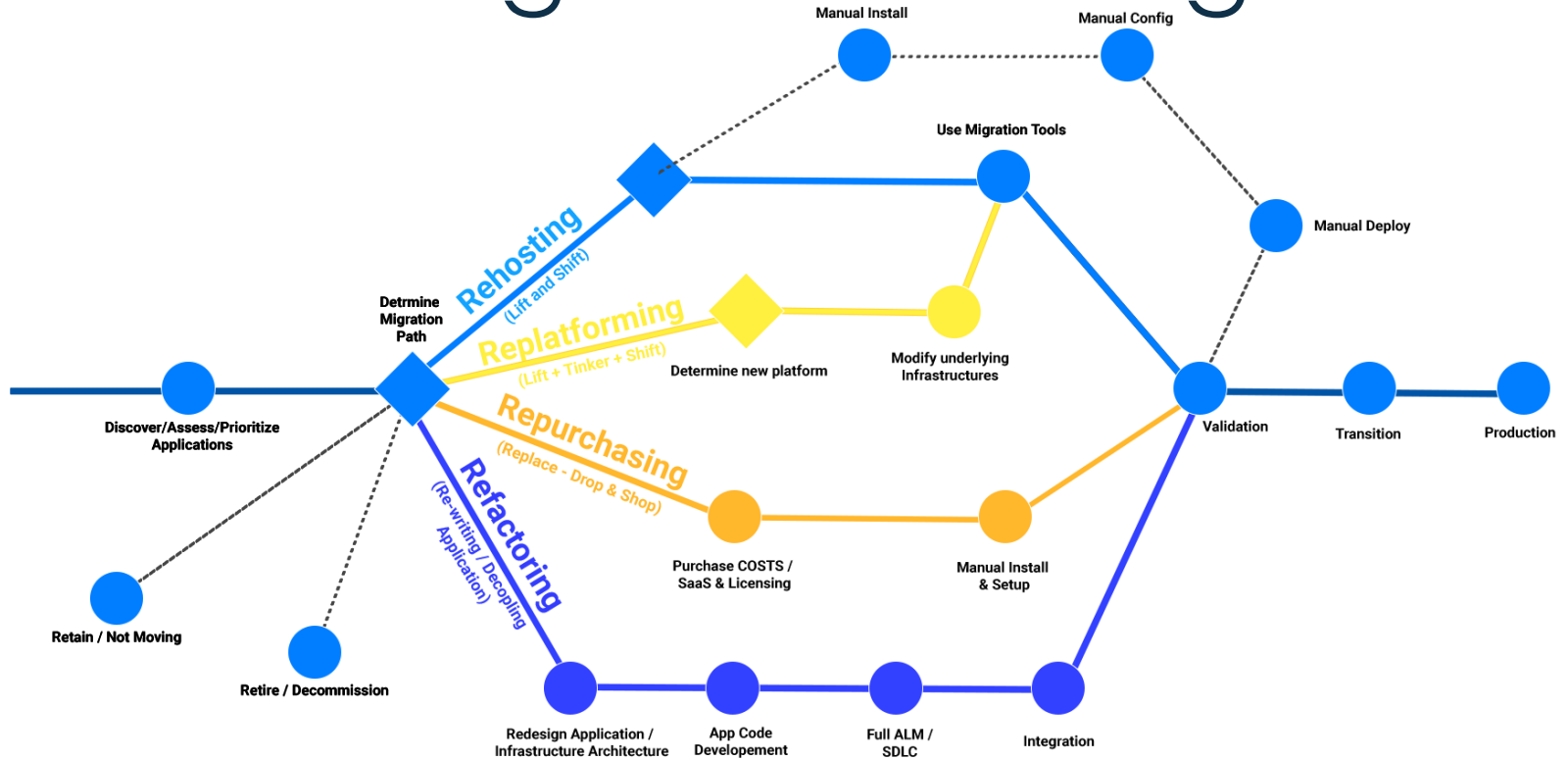- ✓ Serverless architectures
- ✓ Experiment
- ✓ Mechanical Sympathy

Cost Optimization

- ✓ Adopt consumption model
- ✓ Measure efficiency
- ✓ Stop spending on Data Center
- ✓ Analyze expenditures
- ✓ Use managed services

Stages of Adoption (SofA)

Project

Reference Architec...

Virtualized serv...

Evolve Operating M...

Educate and Train

Reinvention

6 R's Migration Strategies

Thank You!
Questions and Comments.