



# How to Build a Business Case for Cloud

STEEN DALGAS – CLOUD ECONOMIST - PUBLIC SECTOR/FINANCIAL SERVICES  
SOUTHERN AFRICA



# Companies that don't *constantly* **reinvent** don't last.

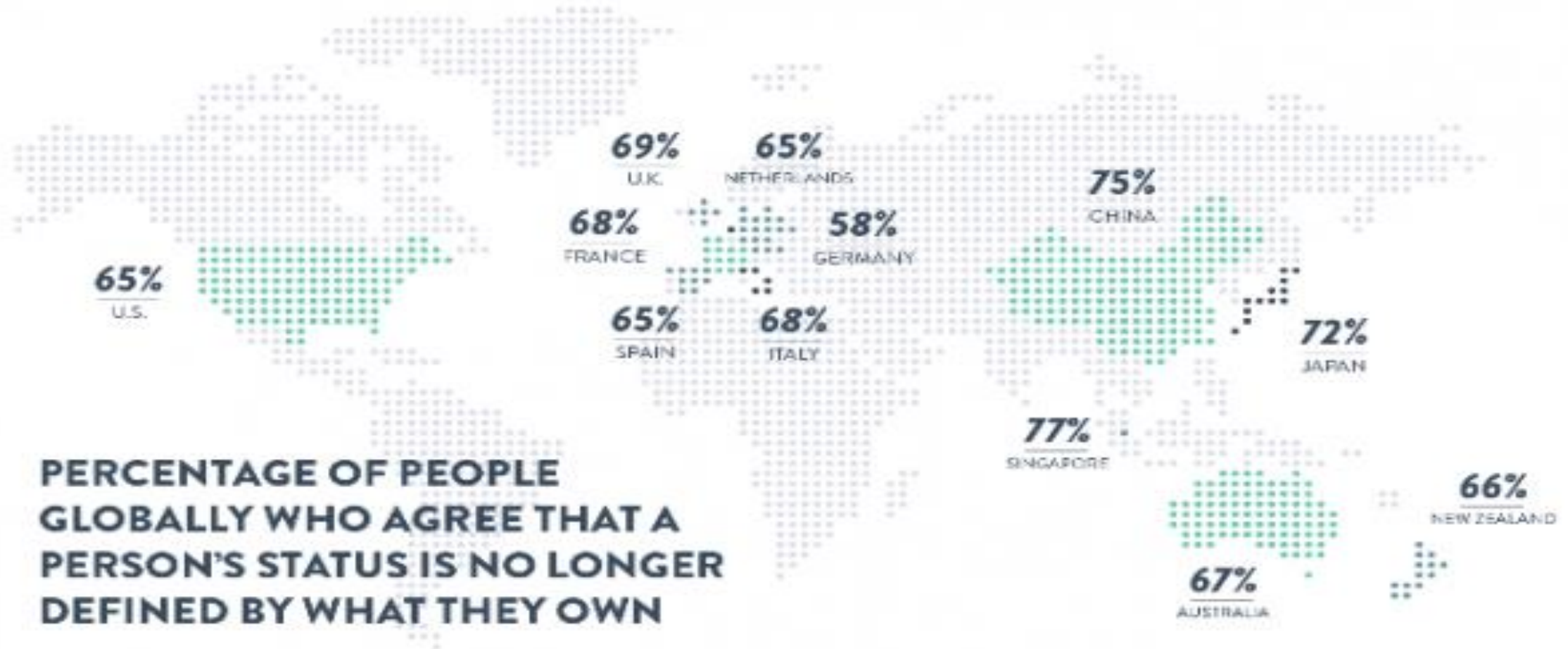
52% of Fortune 500 companies since 2000 have been acquired or gone bankrupt.

Only 12% of Fortune 500 companies that existed in 1955 still exist today.

50% of U.S.-based startups fail within the first year.

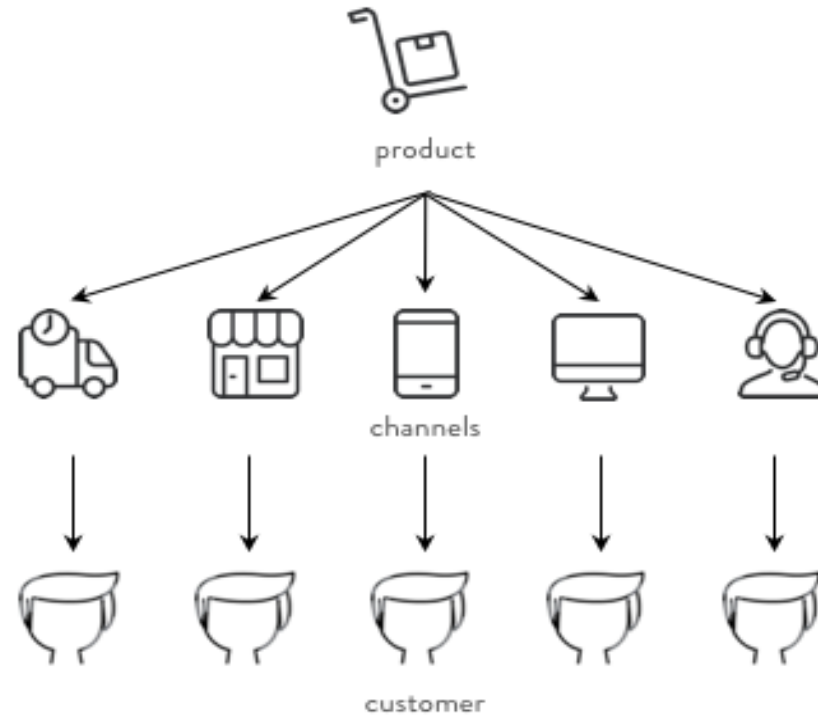
# We are moving to a Subscription World

13



# ONCE-IN-A-CENTURY SHIFT IN HOW BUSINESSES OPERATE

**STATIC** Product-Centric Business Model



**DYNAMIC** Subscription Business Model

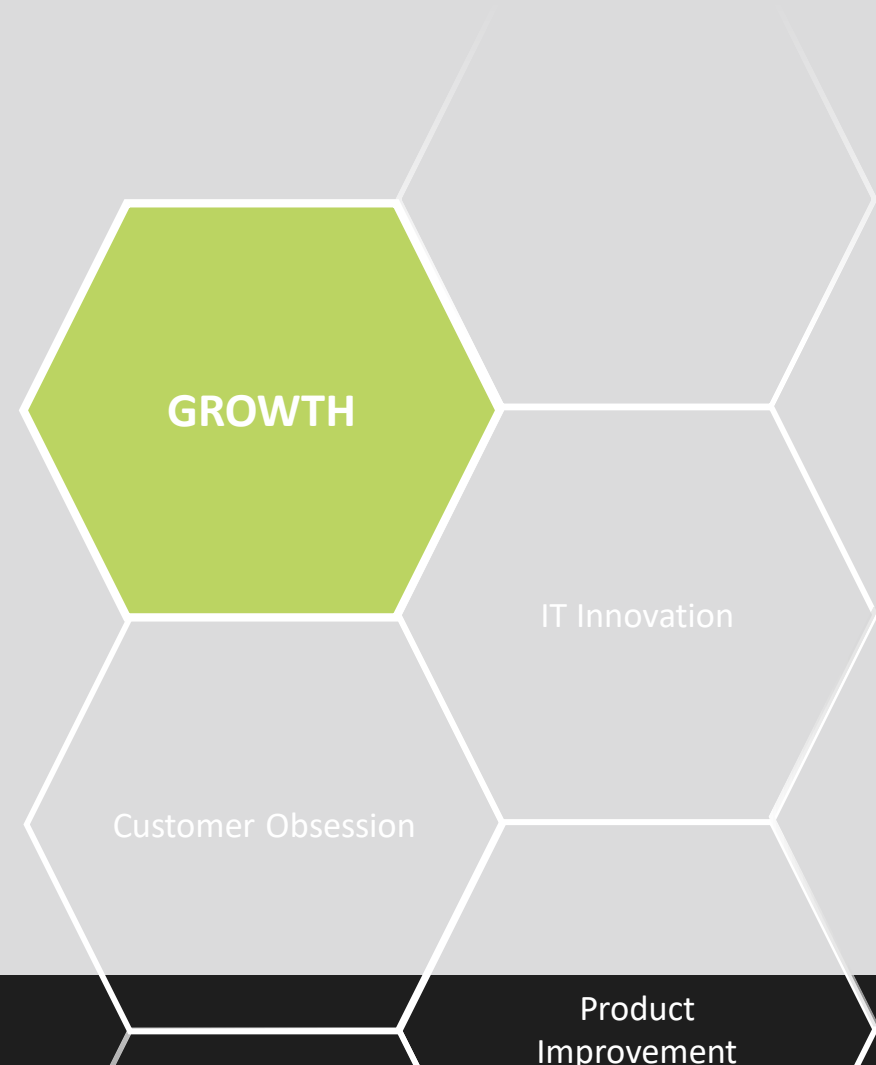


# CEO's need innovation to drive growth

“Infrastructure & Operations leaders must work with the CIO and their peers to help build in-house IT and digital capabilities that will deliver growth”

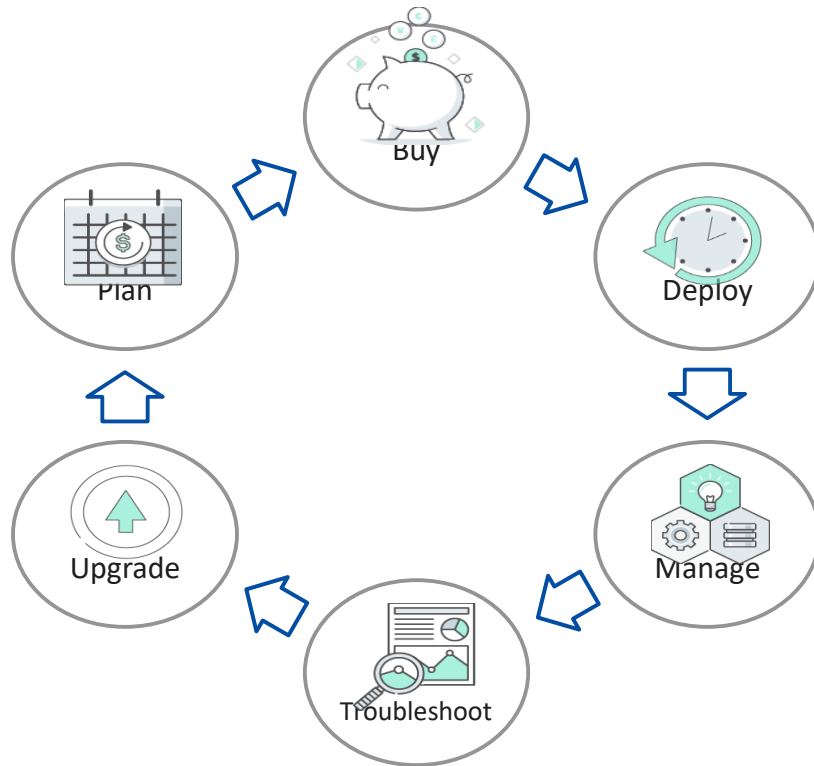
“57% of CEOs are focused on re-internalizing IT and digital.”

-- Gartner





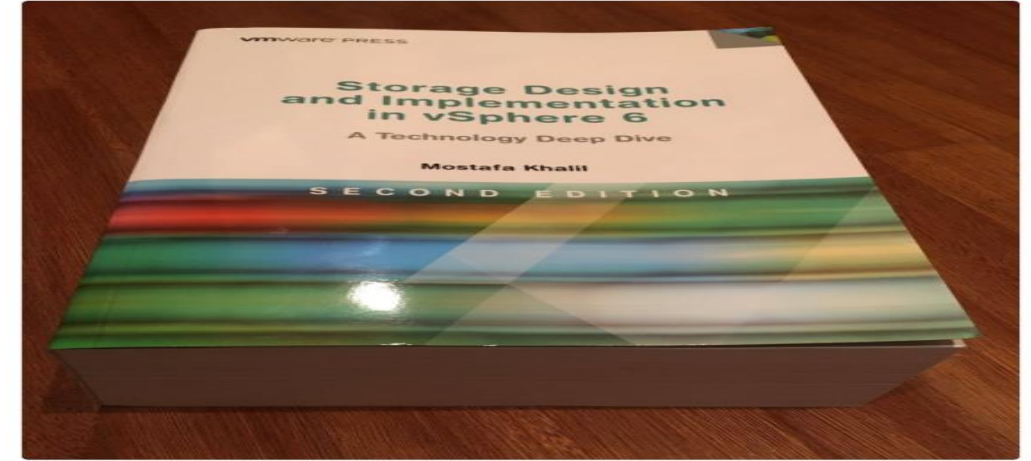
# IT Is Hurting Due to Complexity



Mostafa Khalil  
@MostafaVMW



The book is here. The publisher managed to fit the 1242 pages in one volume.



9:16 PM - 1 Aug 2017

26 Retweets 58 Likes



# Time Spent on Infrastructure, Less on Apps

“Our Application Developers  
circumvent IT”

20% applications

80% infrastructure

**Infrastructure sucks up valuable resources**



# YOU NEED CLOUD LIKE TECHNOLOGY

## Rapid Time to Market

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Deploy apps in minutes

## Flexible IT Consumption

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Get & pay for what you need



## One-click Simplicity

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No low-level infra mgmt

## Continuous Innovation

---

Infra regularly gets better





## *PUBLIC CLOUD DOES NOT ALWAYS FIT*



### Data Gravity & Legacy Apps

Make migrations hard;  
plus fear of vendor lock-  
in where data resides



### Regulatory Concerns

That do not permit  
hosting data outside of  
an org's geography



### Loss of Control

From being able to  
deploy custom solutions  
to protect your apps and  
data



### Unpredictable Costs

Overruns due to limitless  
resources and high egress  
charges

# Public Cloud = Unpredictable Costs



**Corey Quinn**  
@QuinnyPig

Follow



Medical billing is the only time where you don't know what it's going to cost until afterwards, when it's too late and you're already on the hook for it.

Oh, and the cloud's billing model does that exact thing too.

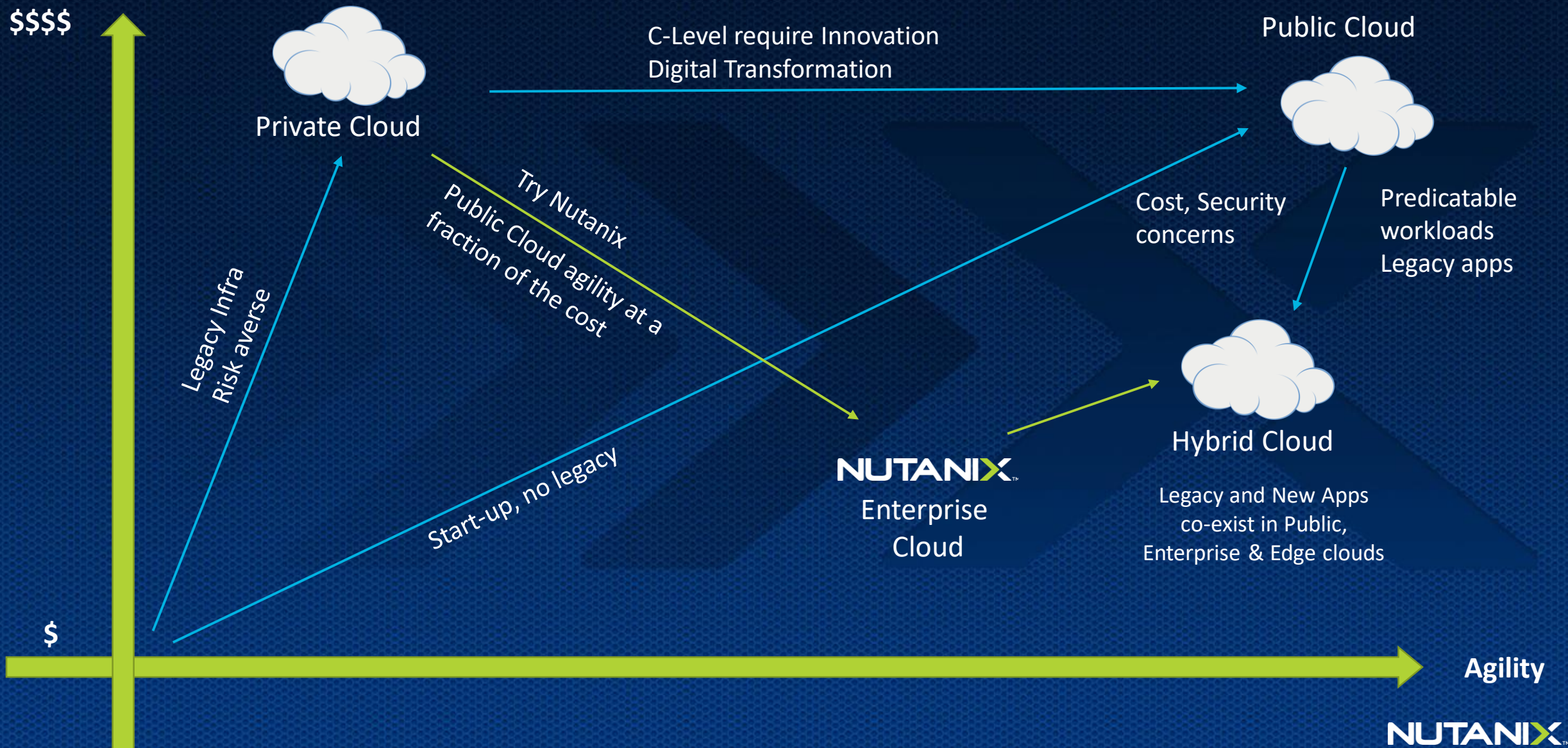
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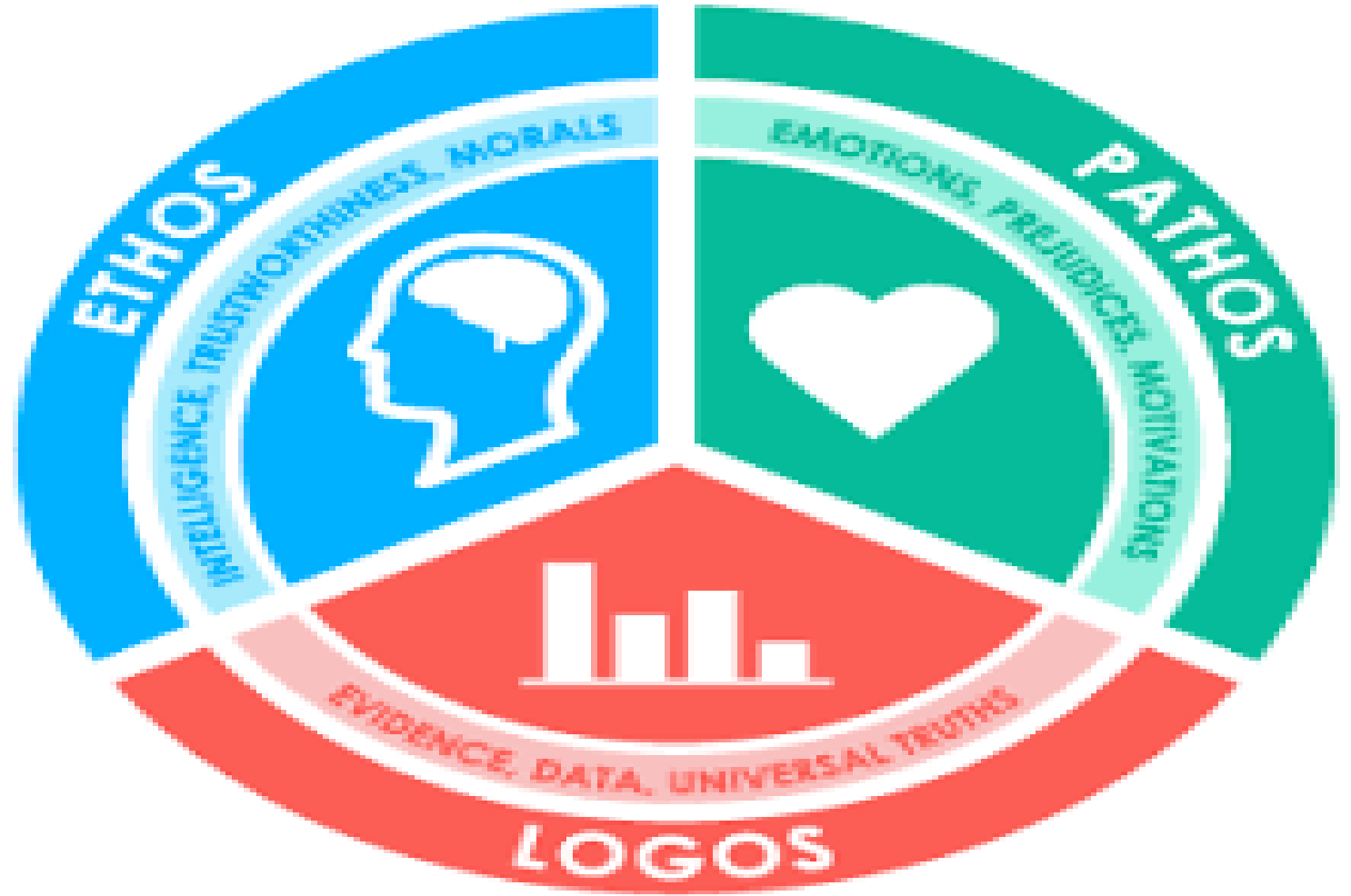




# Many ways lead to Hybrid Cloud



# How to build a Compelling Business Case





Resource allocation must be 100% transparent<sup>| 13</sup>

Part One -  
Ethos



**Koko's stepdaughter got R800m tender in  
Eskom looting scandal - report**

Mar 10 2019 11:37 Fin24

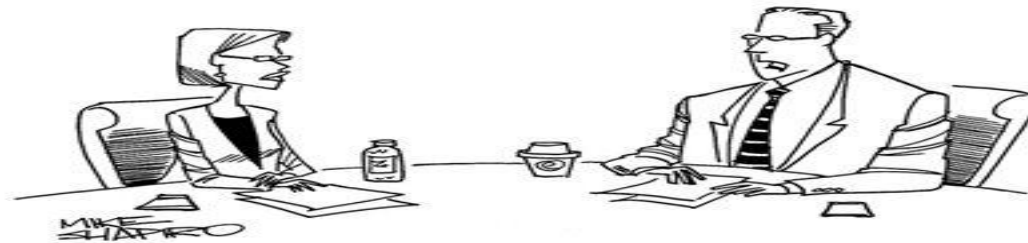


# Part Two - Pathos

## ***DERAILMENT FACTORS TO RATIONAL DECISION MAKING***

*You are dumber than you think you are*

# INVESTMENT DECISION MAKING



"Collins, it's been brought to my attention that your secret institutional biases are in direct conflict with mine."



## ANCHORING



Options need to be chosen wisely

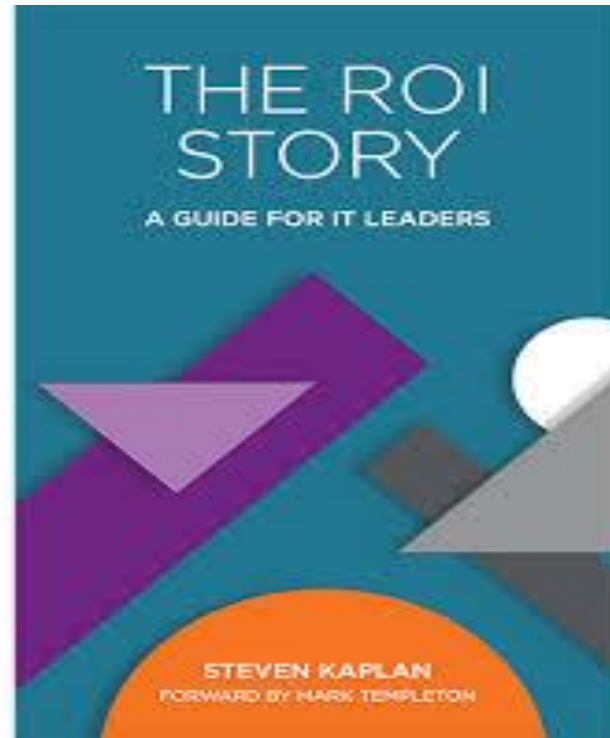
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WORLD	
BUSINESS	
FINANCE & ECONOMICS	
SCIENCE & TECHNOLOGY	
PEOPLE	
BOOKS & ARTS	
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DIVERSIONS	

Option 3 went from 67% to 16% by eliminating option 2

Source Dan Ariely Predictably irrational



## Part 3 Logos:- The Financial Analysis Approach

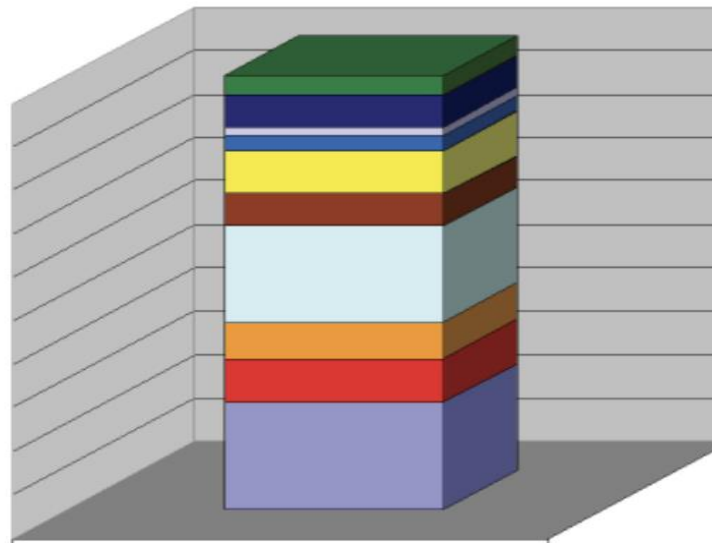




# Key Principles of IT Economics

## 1. Price vs Cost

- Price is about 20% of TCO
- Far too often, procurement is determined by the lowest bid, without consideration of the fact that low price architectures often produce higher costs of ownership.
- If long-term, true OPEX and CAPEX cost reduction is really the goal, then a total cost model is essential.



Baseline TCO

- Data Center Floor Space
- Power, Cooling
- Service Level Agreement Penalties: Backups
- Scheduled Downtime
- Outage Risk
- Contract Labor
- Internal Labor
- Hardware Maintenance
- Software Maintenance
- Purchase



# Cloud Economics - Real life example



VS.



	Few Days	One Year As Commuter
GPS Navigation	\$39	\$3,105
Daily Car Rental	\$156	\$12,428
Convention CTN Surcharge	\$10	\$520
Parking Surcharge	\$1	\$31
Customer facility charge	\$18	\$936
Concession recover fee	\$22	\$1,168
Vehicle Licensing Recovery Fee	\$7	\$374
<b>Total</b>	<b>\$253</b>	<b>\$18,562</b>

2017 Hyundai Santa Fe  
List \$30,800

Annual Operating Cost of  
\$2,566



# LARGE INSURANCE CO IN SOUTH AFRICA – 5 YEAR TCO

5 - Year Financial Summary		Replacement 3-Tier	Nutanix
Capital Costs			
	Compute Layer	R14,905,497.60	R35,508,312.00
	Storage	R20,720,000.00	R0.00
	Storage Area Network & Ethernet Switches	R1,400,000.00	R700,000.00
	Server Virtualization Software/Hypervisor	R629,125.00	R0.00
	Capitalized Professional Services/Installation	R280,000.00	R0.00
A.	<b>Total Capital Costs</b>	<b>R37,934,622.60</b>	<b>R36,208,312.00</b>
Operating Costs			
	Post Warranty Support	R7,924,000.00	R0.00
	Server Virtualization Software Support	R2,614,500.00	R0.00
	Power & Cooling	R11,883,816.00	R4,521,166.52
	Data Center Space	R4,620,000.00	R1,554,000.00
	Administration FTE	R17,500,000.00	R7,000,000.00
B.	<b>Total Operating Costs</b>	<b>R44,542,316.00</b>	<b>R13,075,166.52</b>
A+B	<b>Total Cost of Ownership</b>	<b>R82,476,938.60</b>	<b>R49,283,478.52</b>

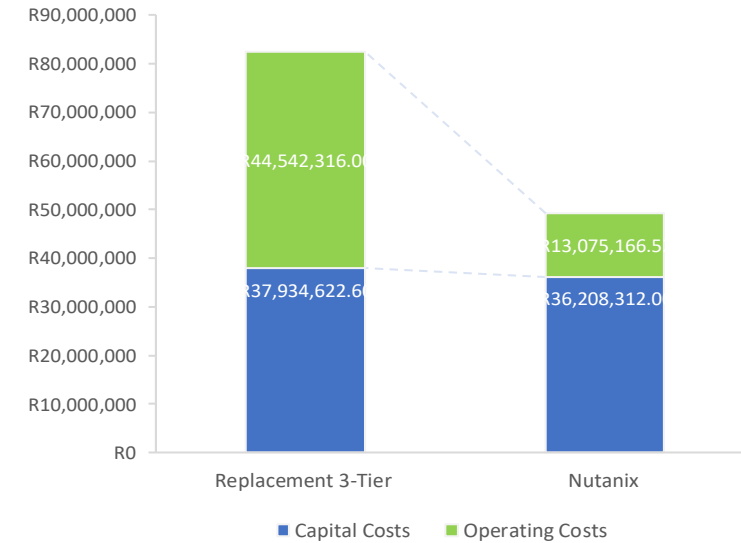
TCO Reduction

40%

Total Cost Savings

R33,193,460.08

3-Tier vs Nutanix Capital & Operating Costs

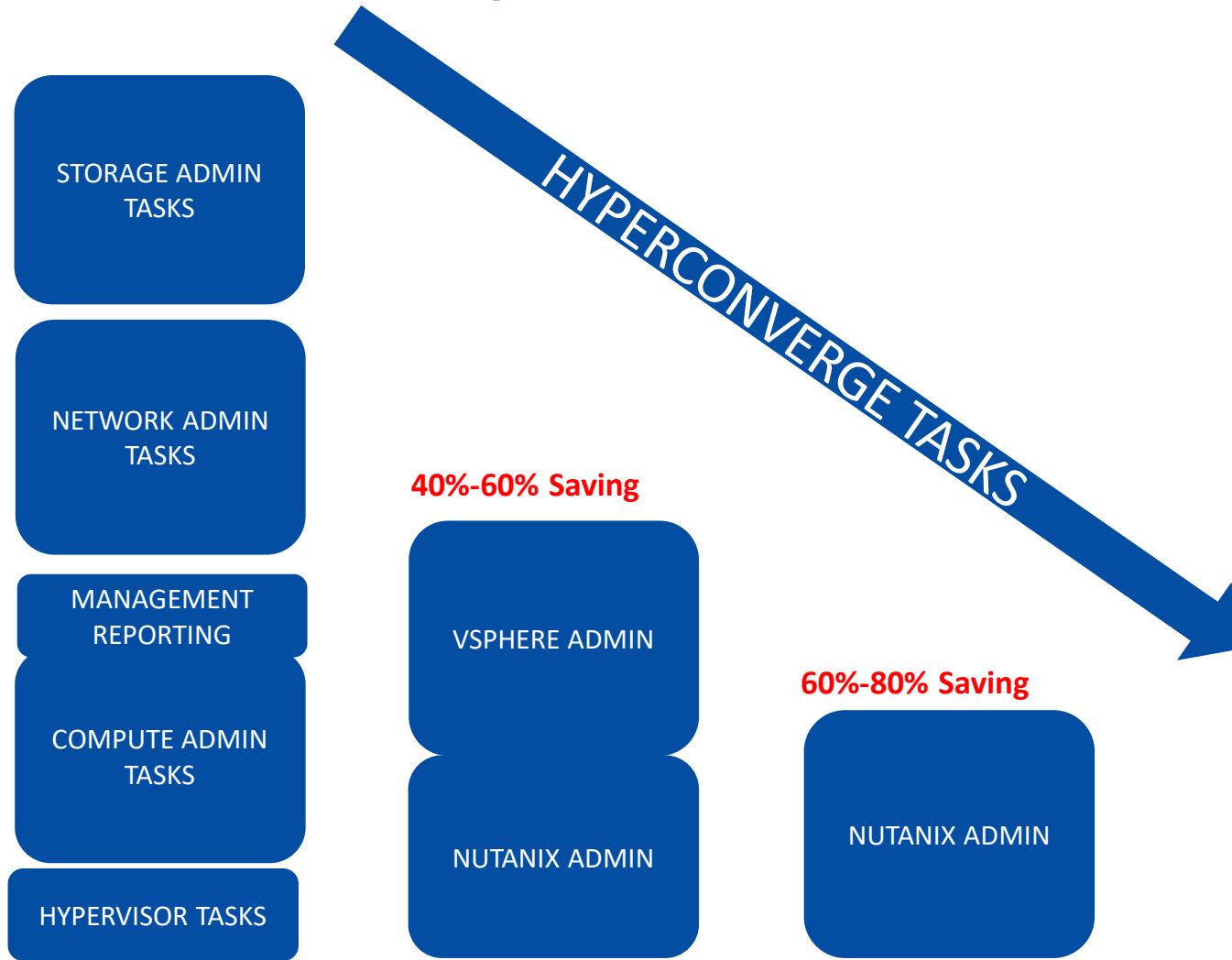


Current Run Rate Estimate			
	Per Annum		5 Years
Support	R 9,451,813.45		
Administration FTE	R 3,500,000.00		
Power/Cooling	R 5,293,600.00		
Space	R 887,040.00		
<b>Total</b>	<b>R 19,132,453.45</b>		<b>R 95,662,267.24</b>

*"Nutanix delivers up to 75% lower operational cost for a similar upfront capital investment vs traditional IT"*



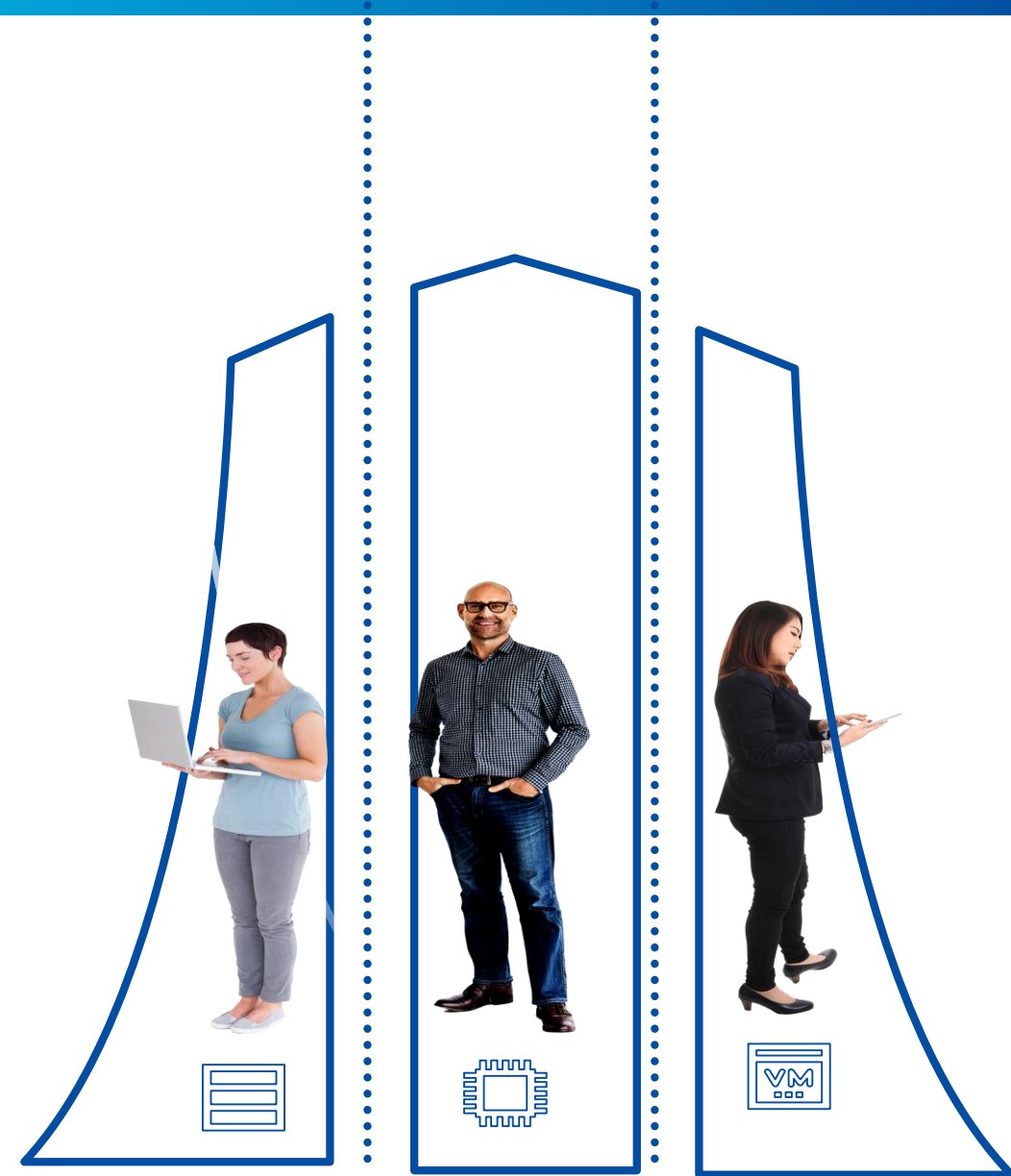
# Hyperconverge Operations



3 TIER

NUTANIX+ESX

NUTANIX+AHV





# 3 TIER

## Data Migration

- Refreshed 4PB of storage annually
  - Took 9 months each year
  - \$700,000 per annum

## Deployment

- Deploying 10 Node Cluster with vSphere
- 7-9 Hours

## Training & Certification

- Up to 9 months to certify as a VMWare specialist



# NUTANIX

## Data Migration

- 1 week to accomplish what takes up to 9 months in the 3 Tier

## Deployment

- Deploying 10 Node Cluster to AHV/Prism
- 45-90 minutes

## Training & Certification

- Your team can be trained to an equivalent level on Nutanix in just two weeks

## Support

- 92% NPS Score



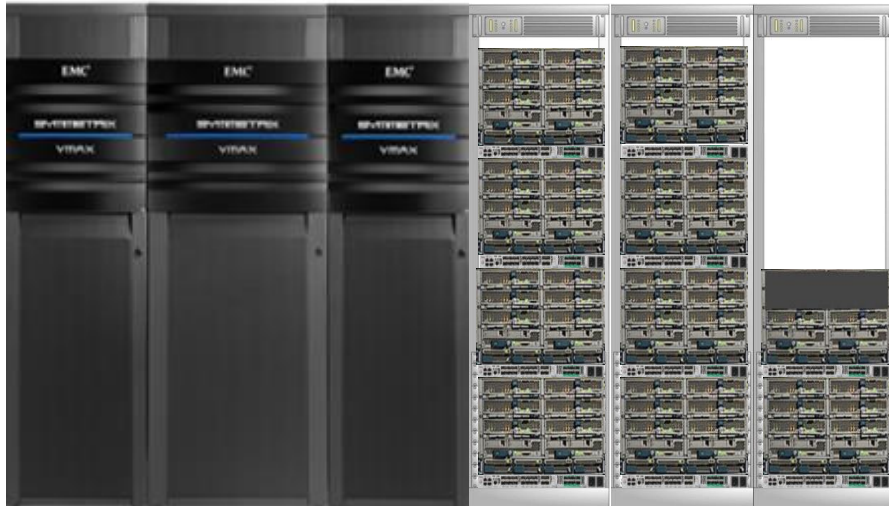
# Datacenter Cost Savings Potential = Huge



## ***SOUTH AFRICAN FINANCIAL SERVICES COMPANY***

***Reduced datacenter footprint from 192U to 12U, for a 16:1 reduction  
across all four use cases***

### **3 Tier Legacy Design**



230 RU



54 RU

#### **Assumption Industry**

\$10.00 per U per month  
(\$23 is industry standard)

Nutanix is 15% of the equivalent 3 Tier  
Space (514U vs 72U actual)

**1.9 Racks vs 12 Racks**

**2.8m ZAR benefit for Nutanix**

***87,314 KWHR for 3 Tier vs 24,159 KWHR for  
Nutanix (4 Year lookback results)***



# ROKiT WILLIAMS RACING



## An Edge TCO Example



“Reducing the physical amount of equipment massively lowered the cost of shipping to each Grand Prix. We save £150,000 (3mR) per season in shipping costs which is a big deal because it’s money we can now spend on improving car performance.” Williams predicts that over the expected lifecycle of three years the solution will recoup 100 per cent of its investment across both trackside and factory environments.

OPEX

OPEX

CAPEX

CAPEX

**Traditional IT**

**Nutanix**

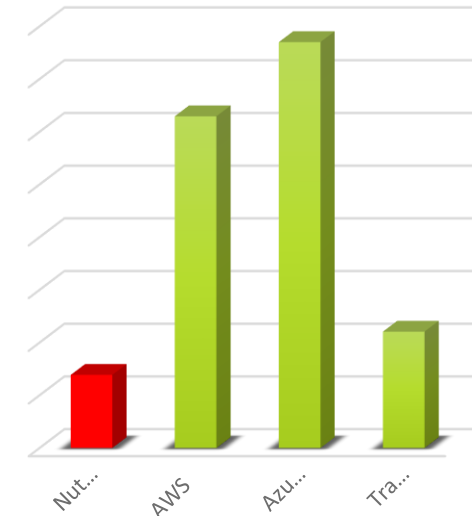


# PUBLIC CLOUD TCO – LIFT AND SHIFT CAN BE EXPENSIVE <sup>| 24</sup>

Assumes lift and shift

TCO Financial Summary				
5 YEAR COST OF OWNERSHIP MODEL				
	Option 1: Nutanix	Option 2: AWS	Option 3: Azure	Option 4: Traditional IT
<b>Capital Costs</b>				
Hardware Capex	\$279,934	\$0	\$0	\$551,200
Ethernet /TOR Switches	\$20,000	\$0	\$0	\$40,000
Nutanix SW	\$585,252	\$0	\$0	\$0
Other	\$0	\$0	\$0	\$0
Server Virtualization Software/Hypervisor	\$0	\$0	\$0	\$0
Capitalized Professional Services/Installation	\$15,000	\$0	\$0	\$30,000
<b>Sub-Total Capital Costs</b>	<b>\$900,186</b>	<b>\$0</b>	<b>\$0</b>	<b>\$621,200</b>
<b>Operating Costs</b>				
Data Center Rack Space	\$30,240	\$0	\$0	\$70,560
Power & Cooling	\$94,569	\$0	\$0	\$310,811
Compute Instances	\$0	\$2,950,220	\$3,403,400	\$0
Storage Instances	\$0	\$2,078,742	\$3,275,462	\$0
Storage Egress	\$0	\$179,030	\$28,181	\$0
HW Support	\$113,144	\$0	\$0	\$205,360
Direct Connect/Express Route	\$0	\$234,729	\$27,628	\$0
Cloud Support	\$0	\$352,027	\$467,520	\$0
Server Virtualization Software Support	\$0	\$0	\$0	\$0
Administration	\$250,000	\$500,000	\$500,000	\$1,000,000
<b>Sub-Total Operating Costs</b>	<b>\$487,953</b>	<b>\$6,294,750</b>	<b>\$7,702,191</b>	<b>\$1,586,731</b>
<b>Opportunity Costs</b>				
Time to Solution	\$0	\$0	\$0	\$0
Downtime Costs	\$0	\$0	\$0	\$0
<b>Sub-Total Opportunity Costs</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>Total Cost of Ownership</b>	<b>\$1,388,138</b>	<b>\$6,294,750</b>	<b>\$7,702,191</b>	<b>\$2,207,931</b>

5 YEAR Platform TCO

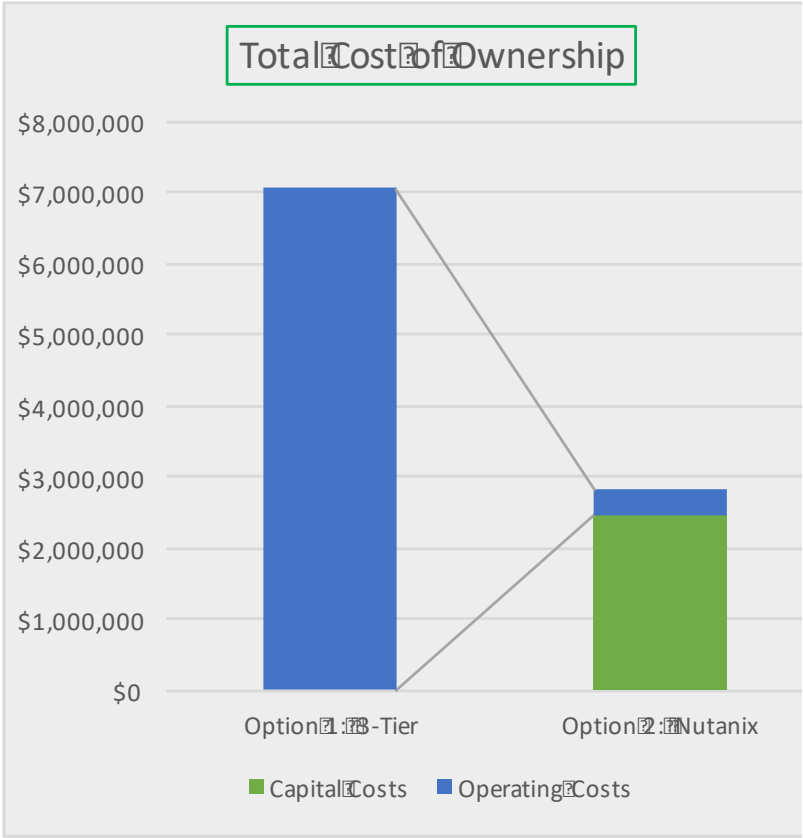




# Outsourcing on 3 Tier is not the answer to Cloud

## TCO Financial Summary

	Infra. as a Services	Option 2: Nutanix
<b>Capital Costs</b>		
Compute Layer	\$0	\$2,383,330
Data Storage Services	\$0	\$0
Storage Area Network & Ethernet Switches	\$0	\$60,000
Fabric Interconnects	\$0	\$0
SAN/Ethernet Ports & Cables	\$0	\$9,900
Server Virtualization Software/Hypervisor	\$0	\$0
Capitalized Professional Services/Installation	\$0	\$26,400
<b>Sub-Total Capital Costs</b>	<b>\$0</b>	<b>\$2,479,630</b>
<b>Operating Costs</b>		
Infra. as a Services	\$7,069,520	\$0
Power & Cooling	\$0	\$190,883
Post Warranty Support	\$0	\$0
Server Virtualization Software Support	\$0	\$0
Administration FTE	\$0	\$143,000
<b>Sub-Total Operating Costs</b>	<b>\$7,069,520</b>	<b>\$333,883</b>
<b>Total Cost of Ownership</b>	<b>\$7,069,520</b>	<b>\$2,813,513</b>



The background features a blue-to-green gradient with large, semi-transparent, stylized 'X' shapes. The Nutanix logo is centered in the upper half of the image.

**NUTANIX™**

Thank you

# Trusted by 13,000+ Customers Worldwide

