Trasformazione nella Sanità

Un nuovo approccio alla Sicurezza a supporto della Trasformazione Digitale
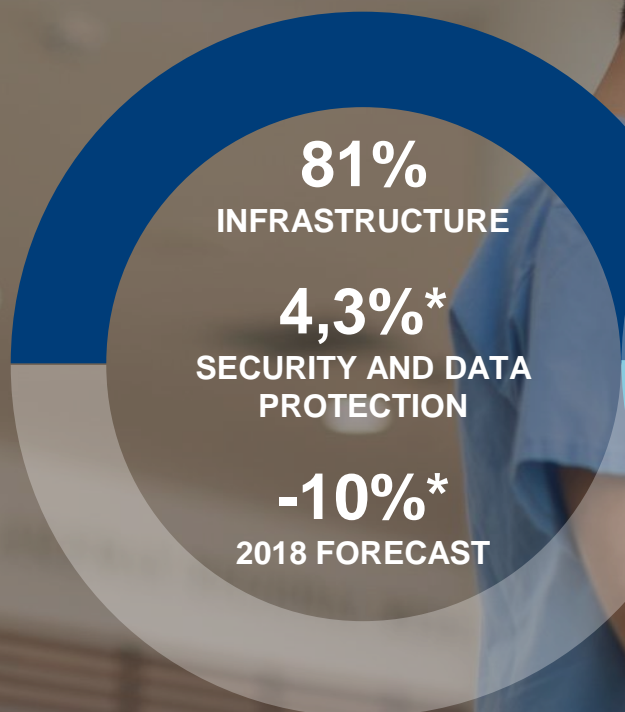
Rodolfo Rotondo
Senior Business Solution Strategist
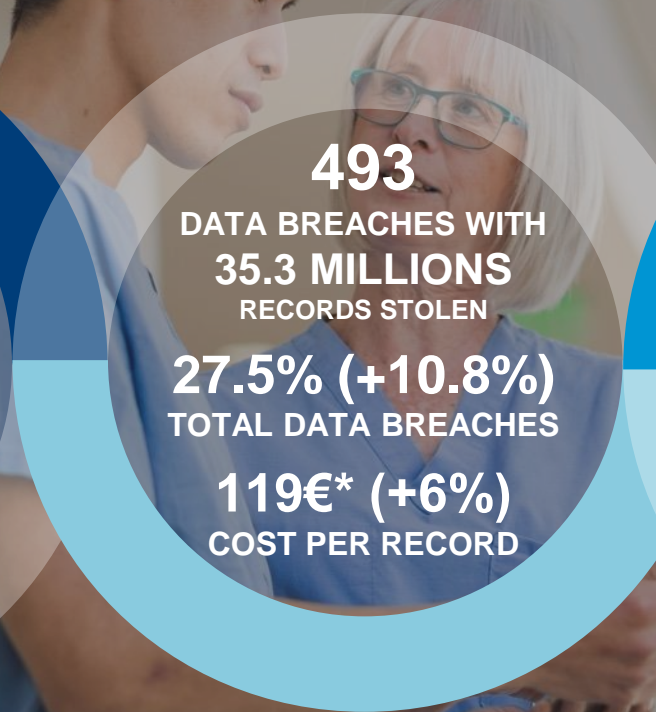Torino, 12 ottobre 2017
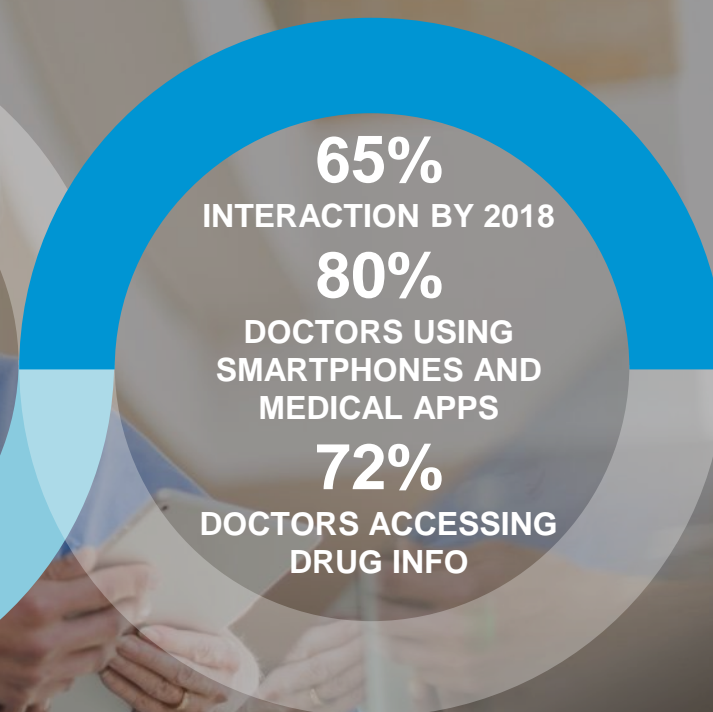
vmware®

Some challenges for IT in Healthcare

BUDGET

81%
INFRASTRUCTURE

4,3%*
SECURITY AND DATA PROTECTION

-10%*
2018 FORECAST

SOURCE: GARTNER (2015), *NETICS (ITALY 2017)

SECURITY

493
DATA BREACHES WITH 35.3 MILLIONS RECORDS STOLEN

27.5% (+10.8%)
TOTAL DATA BREACHES

119€* (+6%)
COST PER RECORD

SOURCE: GEMALTO, *PONEMON INSTITUTE (ITALY 2017)

MOBILE AND CLOUD

65%
INTERACTION BY 2018

80%
DOCTORS USING SMARTPHONES AND MEDICAL APPS

72%
DOCTORS ACCESSING DRUG INFO

SOURCE: FORBES

vmware®

Transforming Healthcare IT

4 IT FORCES IMPACTING HEALTHCARE

Modernize Data Centers

Integrate Public Cloud

Deliver a Digital Clinical Workspace

Transform Security

BUSINESS OUTCOMES

Reduce cost and complexity

+

Mobilize providers and engage patients

+

Secure patient information

vmware®

3
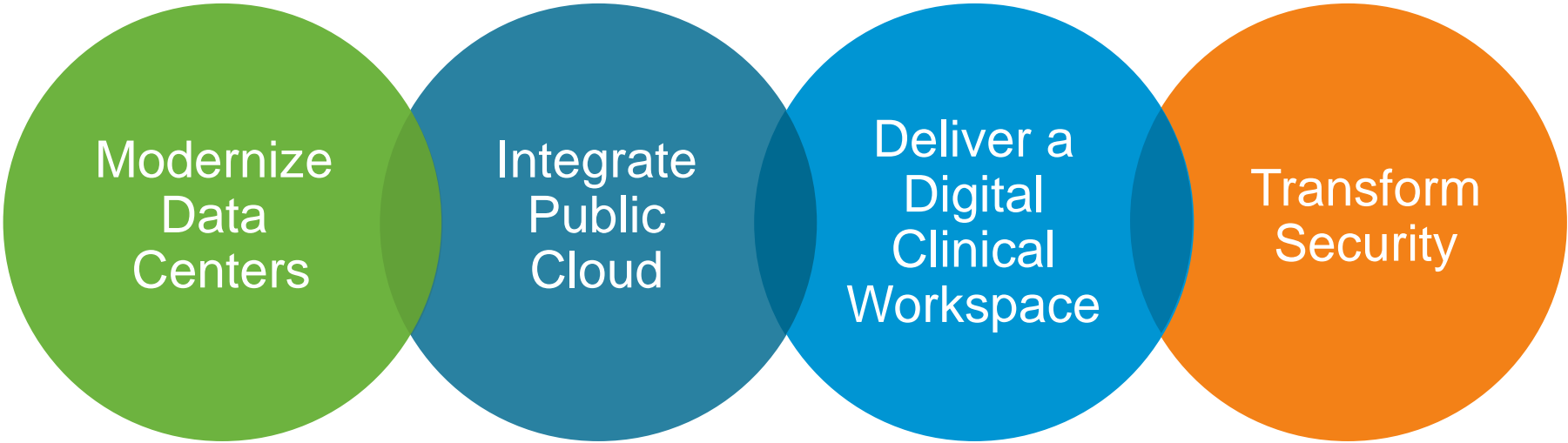
In the
Past

Modernize Data Centers

Today
A Faster and Simpler Path

Modernize Healthcare Data Centers

ESSENTIAL IT CAPABILITIES

REDUCED OPERATING COSTS
more time innovating, less time building

IT AUTOMATION adaptable to new business models, partnerships, technologies

NEXT-GEN HEALTHCARE SERVICES that support value based payment models, telemedicine, and more

ESSENTIAL OUTCOMES

REDUCE COMPLEXITY – 95% faster initiation, 96% faster addition than Build Your Own

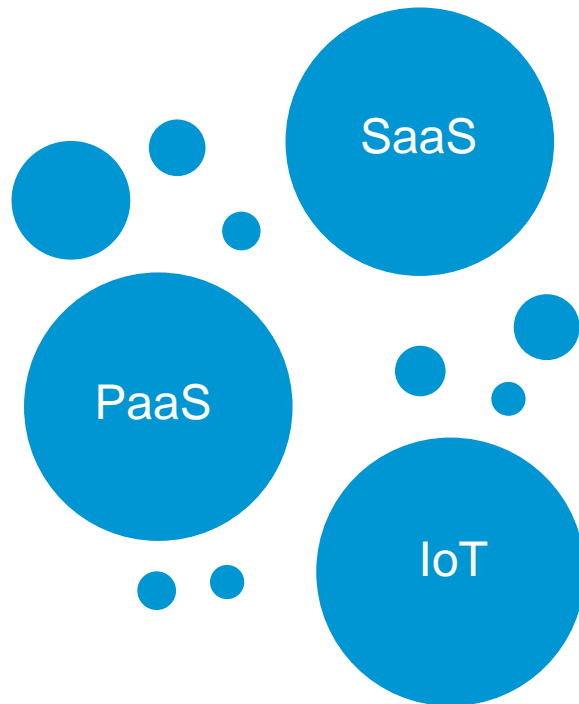**REDUCED TCO** – up to 30% less than traditional infrastructure

CLOUD READY to support bi-modal IT and a new breed of apps

vmware®

Integrate Public Clouds

RAPID INNOVATION TRANSFORMING HEALTHCARE
Telehealth, HIE, IoT, SaaS, PaaS

SaaS

PaaS

IoT

HEALTHCARE IT TRANSFORMING
to support and enable innovation in healthcare

POC's

Dev, Test, QA

DR

Hosted EMR

Training

Apps

Research

vmware®

Integrate Public Clouds

ESSENTIAL IT CAPABILITIES

MANAGE MULTIPLE CLOUDS for operational efficiency and service best-fit

IMPROVE BUSINESS AGILITY through fast set up and tear down of compute resources

MEET COMPLIANCE REGULATIONS with certified partners

ESSENTIAL OUTCOMES

FASTER ADOPTION of new applications and services

REDUCED COSTS by avoiding hardware purchases and maintenance

CLOUD READY to support bi-modal IT and a new breed of apps

vmware®

Mobilizing Healthcare

Digital Clinical Workspace

ESSENTIAL IT CAPABILITIES

ALWAYS ON
24 x 7 availability to care providers

MOBILE CLINICAL WORKFLOWS
Mobile device management, identity management, BYO

SECURITY
Data centralization, device wiping, micro segmentation

ESSENTIAL OUTCOMES

SAVE UP TO 10 minutes per hour

MORE TIME for patients, less time with technology

PROVIDER CHOICE for most effective way to work

vmware®

Transform Security

vmware®

World's Biggest Data Breaches

2017

2016

Brazzers
CEX
Bell
llebrite
MixSense
Clinton campaign
Dailymotion
85200000
Banner Health
Friend Finder Network
412000000
DaFont
Hong Kong Registration & Electoral Office
Istagram
Mutuelle Generale de la Police
Equifax
143000000
nterpark
MySpace
164000000
Linux Ubuntu forums
Minecra..
KM.ru
Lynda.com
Nival
River City Media
1370000000
PayAsUGym Quest Diagnostics
Red Cross Blood Service
Swedish Transpor Agency
Snapchat
Telegram
Three
Zomato
Wonga
Waterly
Yahoo
32000000
Weebly
43000000
World Check
Syrian government
uTorrent
Turkish citizenship database

Some Notable Data Breaches
The latest are even bigger…

June 2015

- **21.5 million records** hacked
- 4 million people affected with personal identifiable information

January 2015

- **78.8 million patient records** has been stolen
- Highly sensitive data exposed (ssn, birth's date, home addresses, …)
- Agreed to pay **$115M.**

July 2014

- Sensitive financial and personal information of **83M customers**
- PGI estimates **$1B** cost, (bank spending **$250M** annually on cybersecurity)

December 2013

- **70 million CC** data stolen
- **$200M** damages
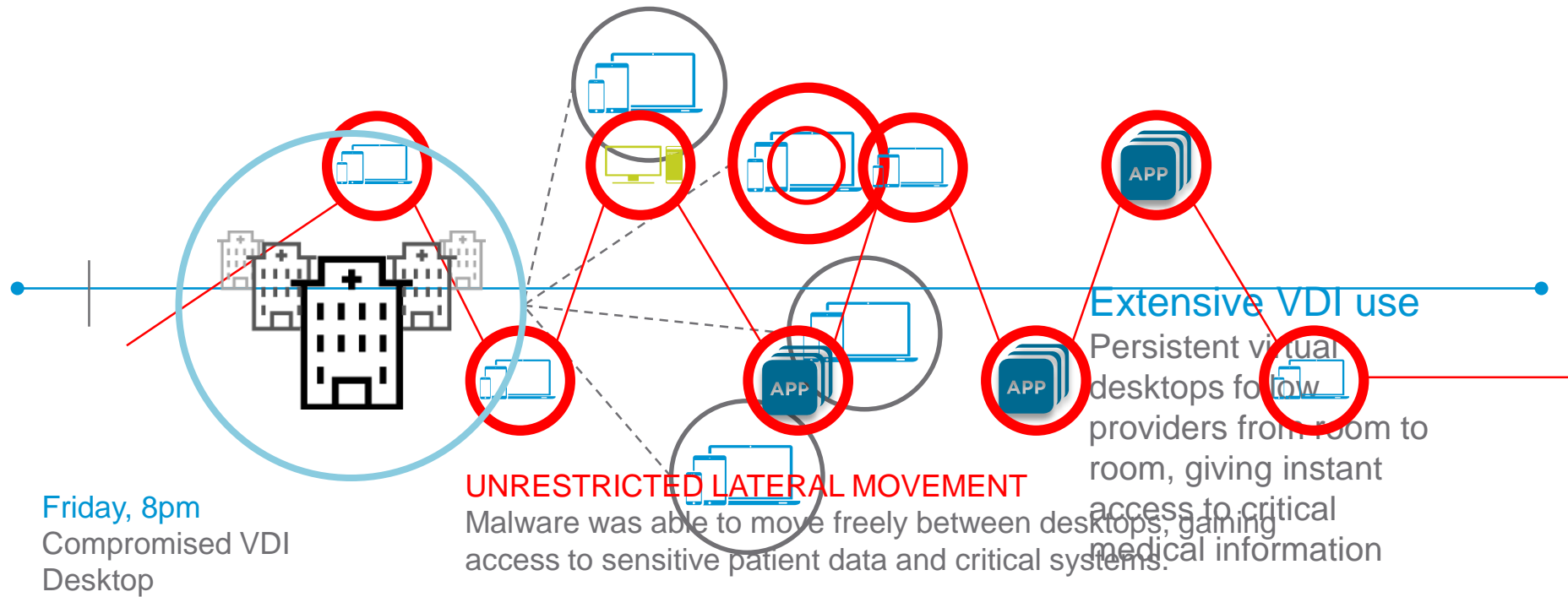- Sales drop 4%
- **CEO & CIO resigns**

vmware®

What Does a "Regular" Data Breach Look Like

RECENT VDI ATTACK

Extensive VDI use

Persistent virtual desktops for providers from room to room, giving instant access to critical medical information
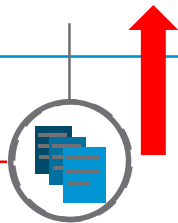
Friday, 8pm
Compromised VDI Desktop

UNRESTRICTED LATERAL MOVEMENT
Malware was able to move freely between desktops, gaining access to sensitive patient data and critical systems.

Transform Security

Despite having been reported to IT **when it occurred**,
a response to the attack was not quick enough to prevent a
significant loss
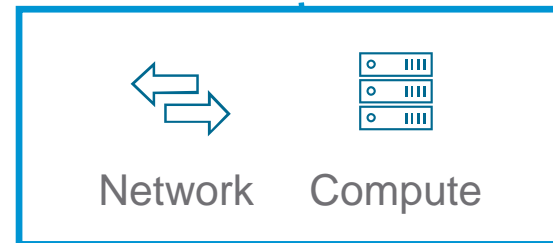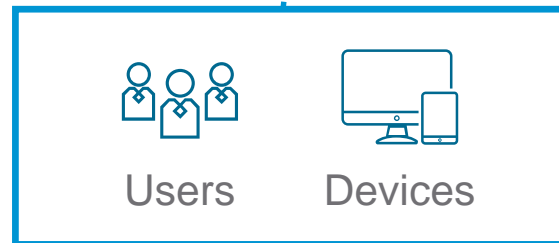
Friday, 11pm
Sensitive Patient Data
Exfiltrated

Saturday, 9am
Security Response
Begins.

vmware®

Enabling a New Approach to Cyber Security

Transform Security

How do we protect our critical applications and data…

…in an increasingly mobile and cloud world?

User Infrastructure

Users   Devices
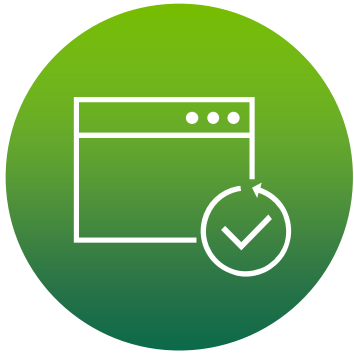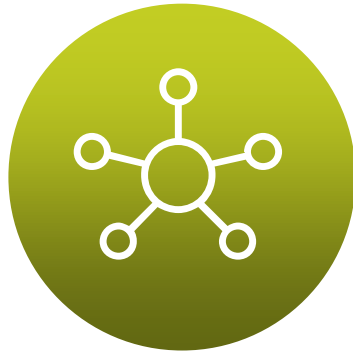
Network   Compute

Cloud Infrastructure

vmware®

16

Transforming Cyber Security

5 Pillars of Cyber Hygiene

Transform Security

Least Privilege

Micro-Segmentation

Encryption
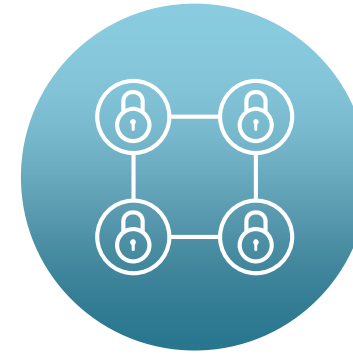
Multi-Factor Authentication

Patching

vmware®
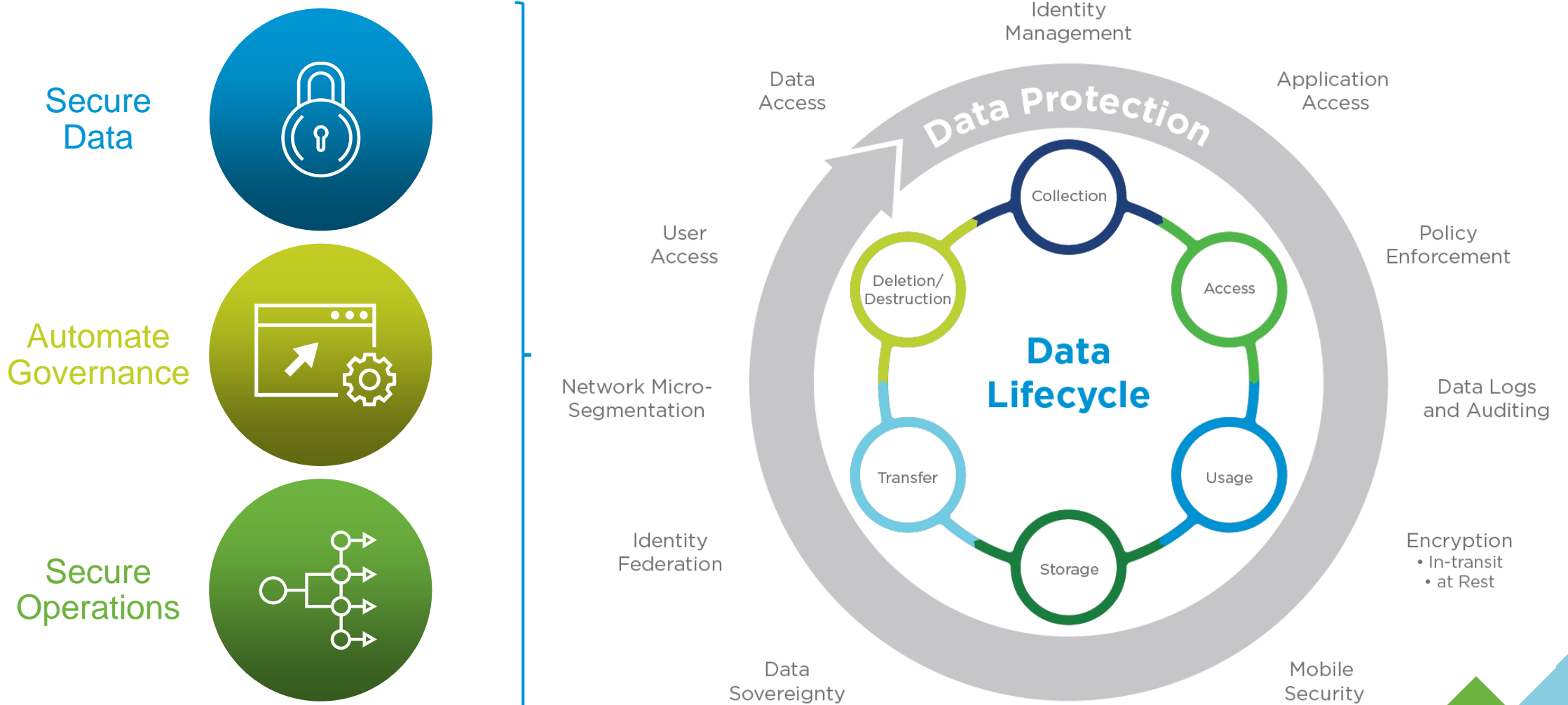
Chasing Bad

Flipping The Security Model

On Its Head

Ensuring Good

By Enabling Least Privilege

Transform Security

Create a Layered Security Approach

Stronger Core

- Layered approach firewalls individual servers, workstations or services
- Identity based security
- Eliminates lateral movement of threats
- Build a zero trust environment

vmware®
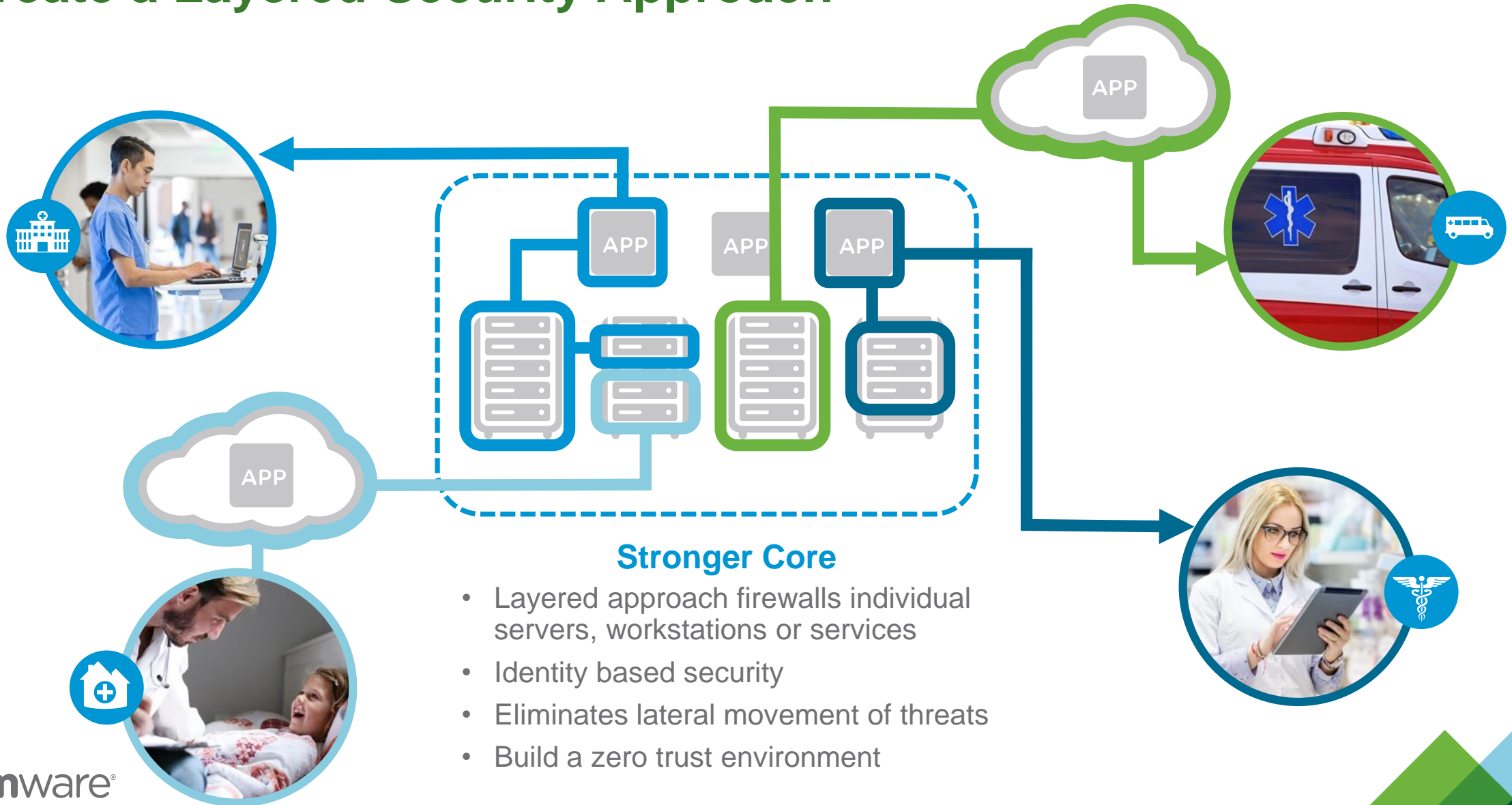
TOGETHER WE CAN…
RE-THINK SECURITY

- Protected online patient portal with network segmentation

- Met Meaningful Use 3 guidelines and compliance with NIST standards

- Achieved almost 100% server virtualization **saving $2.03M** over 7 years
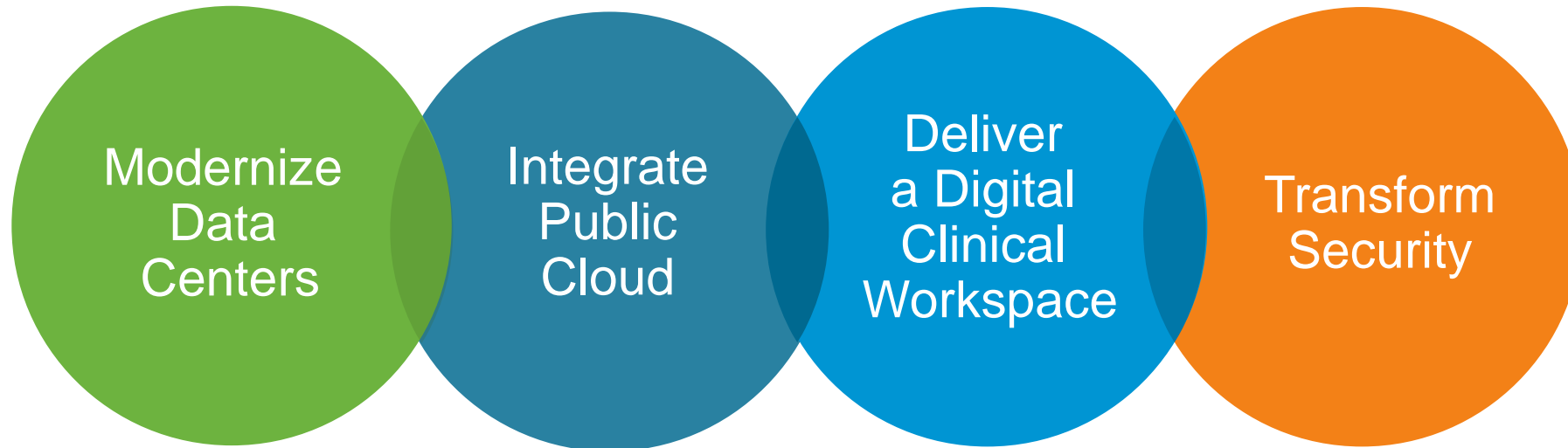
- Minimized risk of lateral movement of malware

Network Virtualization
vSphere server virtualization VMware NSX micro-segmentation

Interfaith
Medical Center

vmware®

Transforming Healthcare IT

4 IT FORCES IMPACTING HEALTHCARE

Modernize Data Centers

Integrate Public Cloud

Deliver a Digital Clinical Workspace

Transform Security

BUSINESS OUTCOMES

Reduce cost and complexity

+

Mobilize providers and engage patients

+

Secure patient information

vmware®

Transforming Healthcare IT – VMware Vision

Any Device

Any Application

Traditional

APP APP APP

Cloud Native

APP APP APP

SaaS

SaaS SaaS SaaS

Any Cloud

Edge Computing

Private Clouds

Public Clouds

Telco Networks

vmware®