



# Improving Patient Care with a Flash Optimized Infrastructure

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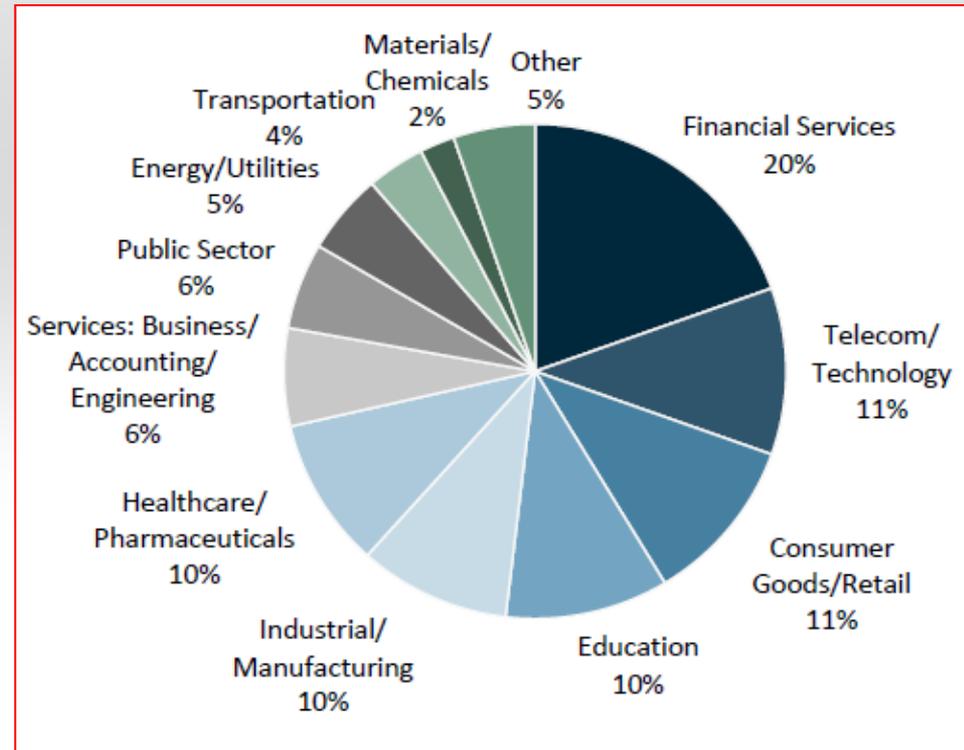
“Due to the proliferation of devices and the infusion of technology into all things and processes, the world is generating more than 2.5 billion gigabytes of data every day...”



Healthcare professionals are inundated with an abundant amount of ways that they can access and store clinical data.

**Healthcare IT departments are given the task of making sure the delivery of that clinical data is readily available** and can be accessed via a myriad of devices, as well as in a secure manner that meets the compliance standards that the entire enterprise has agreed on upholding.

The **deluge of data and the ever-changing ways that the data is accessed is creating some major challenges** and concerns for the majority of professionals who are responsible for managing the nation's healthcare information stream.



2014, Marco Coulter, 451 Research - The Info Pro



# Data is the currency of business and today's competitive advantage

90%

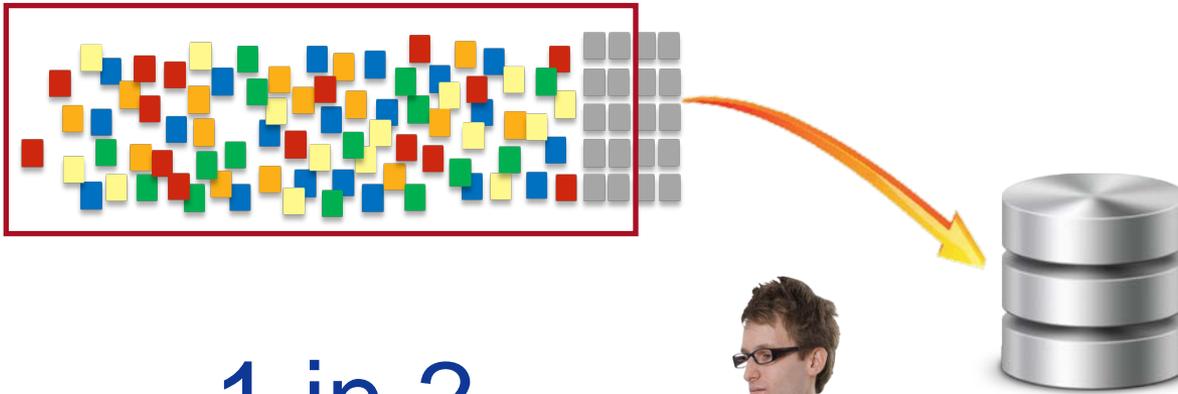
of the world's data was created in the last two years

80%

of the world's data today is unstructured

20%

is the amount of data that is active, operational data



1 in 2

business leaders don't have access to data they need



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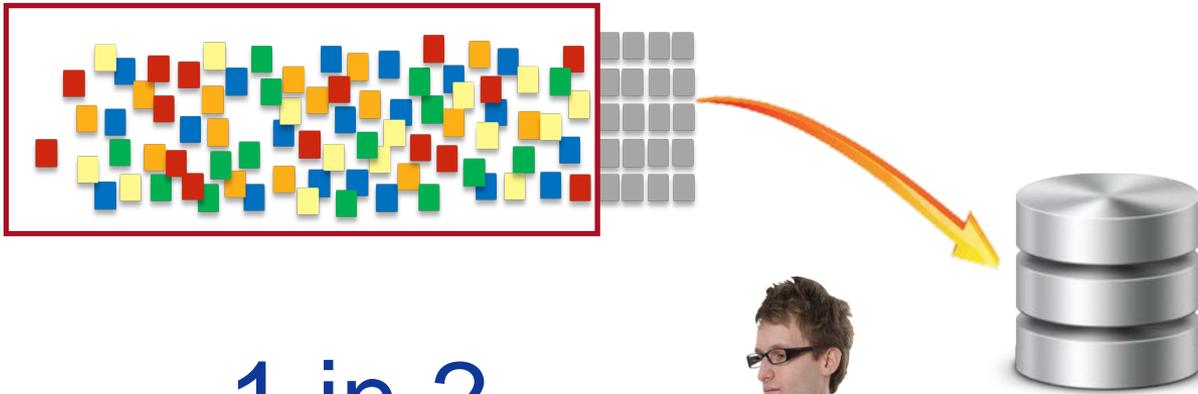
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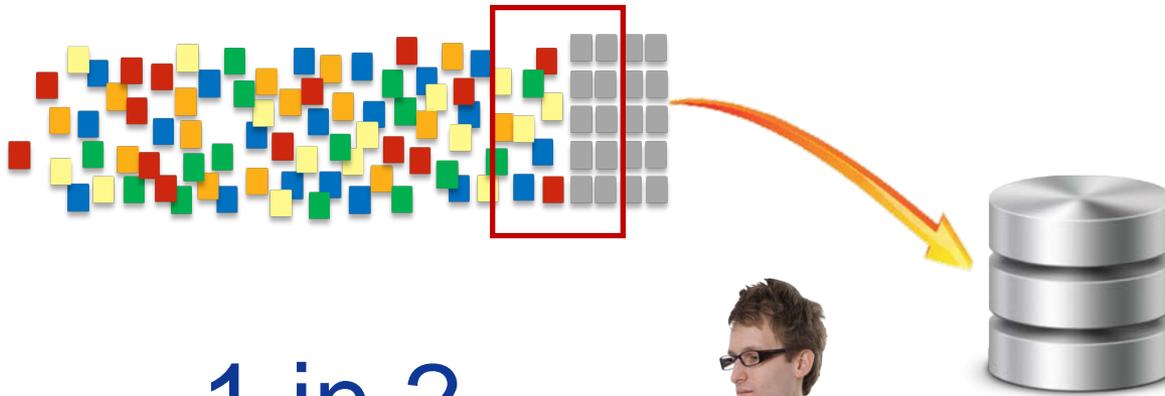
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# The competitive advantage of Analytics and Data

*Speed of insight drives key business imperatives*



83%

of CIO's cited BI and analytics as part of their visionary plan

54%

of companies use analytics for competitive advantage





# Journey to transformative business

## St. Jude Children's Research

**Hospital** is internationally recognized for its pioneering research and treatment of children with cancer and other catastrophic diseases

## Business challenge

With 1.5B+ objects and 20PB+ worth of data on hand and growing, St Jude needed to be able to effectively support mission and meet SLA's





# St. Jude Children's Research Hospital

*Transforming cancer research*

**5x faster**

backup version queries

**7x improvement**

TSM request  
responsiveness

**17x faster**

I/O improvement to DB2

**Solution** – St. Jude is moving its file-based applications off spinning disk on to IBM FlashSystem with Software Defined Storage to meet designated SLAs and reduce key backup processes





# Meaningful customer demand insights

**Kelsey-Seybold Clinic** services more than 500,000 patients in the greater Houston area and is the nation's first NCQA-Accredited Accountable Care Organization

## Business challenge

Deliver quality patient care within a network of clinics by improving performance while managing cost by moving to a scalable, virtualized environment

 **Kelsey-Seybold Clinic**

**Your Doctors for Life**





# Kelsey-Seybold Clinic

*Improving care with flash optimized virtual desktop infrastructure*

**3700 virtual desktops**

supported by a single IBM FlashSystem

**75% data reduction**

through in-line dedupe and compression

**4x better TCO**

than competing all-flash storage

**Solution** – Deployed FlashSystem with Atlantis software for in-line compression along with deduplication and achieved lower cost per desktop and higher performance than dedicated VDI solutions





# XXX School of Medicine

IBM solutions contribute to enhanced patient treatment

## 230x faster

for genomic and scientific computations

## 1000s

of processors randomly accessing over a million files

## 100s

of genomes sequenced, each requiring extreme computations

### Solution Components

- IBM FlashSystem
- IBM Code name: Elastic Storage
- EPIC



**Business challenge:** Leading research-based medical school found that disk operations maxed out under extreme computational requirements of genomic sequencing – an obstacle to their mission of better patient care.

**The solution:** Combined IBM FlashSystem with Elastic Storage which facilitated the tiering of production data into IBM FlashSystem storage pools.

**“We can uncover what is happening specifically in a patient’s tumor, what key driver genes are mutated . . . and then whether we can better match a given patient’s condition to more appropriate treatment.”**



# TriHealth

Optimizing EPIC for better patient reporting with IBM FlashSystem

**>4x better**

performance in patient reporting

**SLA windows**

back in compliance

**100 locations**

in the US including 3 hospitals,  
fitness and health centers

## Solution Components

- IBM FlashSystem 840
- IBM Power Systems
- EPIC
- Business Partner: Forsythe Solutions



**Business challenge:** Unified health provider with performance issues was missing SLAs for patient reporting. In addition, excessive IOPS activity was placing a burden on production systems, affecting their ability to provide superior patient care.

**The solution:** A local IBM FlashSystem client reference in a similar EPIC environment was leveraged to implement an IBM FlashSystem 840 for TriHealth.

**Results:** Reports were generated faster, SLAs were met, a nightly 5 hour job was reduced to less than an hour, all contributing to TriHealth's mission of expertly providing clinical, educational, preventative and social programs.

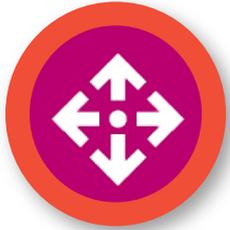


# IBM FlashSystem and Healthcare IT

*A perfect prescription*



Drive a **Competitive Advantage**  
*Data is the world's newest resource*



Enhance **Decision Making**  
*Move away from the few to the empowered many*



Better utilize **Critical and Valuable Data**  
*As the value of data continues to grow, current systems won't keep pace*



Thank You

[ibm.com/storage/flash](http://ibm.com/storage/flash)