Infrastructure: The City of Dallas Data Center

Building a Sustainable Model to address Future City Service Demand

William Zielinski, Chief Information Officer
Daniel Pollak, Sr IT Manager
Information & Technology Services
City of Dallas

Executive Summary

In February 2020, the Dallas City Council identified a goal to become a ***national leader in municipal technology and data***.

As a critical element in achieving this goal, the Information and Technology Services (ITS) Department has established a program team to assess, plan and implement a comprehensive strategy to upgrade and improve the City's *Data Center* operations.

During fiscal year 2021-2022, ITS will develop and present to the Government Performance & Financial Management (GPFM) Committee a detailed multi-year timeline, proposed budget and acquisition strategy for the *Data Center* program.

Agenda

- Dallas/Fort Worth Region a Top Tier Technology Hub
- The Modern Data Center
- ITS Operations
- A Data Center to Support Future City Services
- Projected Cost

Dallas/Fort Worth Region: A Top Tier Technology Hub

Attracting and employing the best and brightest minds in the nation and the world

Dallas/Fort Worth Future Foundations

Semiconductors:

- Texas Instruments
- Rockwell Collins
- TriQuint Semiconductor

Telecomm Corridor:

- AT&T
- Verizon
- Cisco
- Ericsson
- Fujitsu Network Comm

Banking Leaders

- JPMorgan Chase
- USAA
- Citi
- Wells Fargo

Defense Leaders

- Lockheed Martin
- Raytheon

Dallas/Fort Worth Outshines Others

Magnet for Individuals:

- Affordable Cost of Living
- Number of IT Job Postings
- Projected IT Growth

Magnet for Tech Companies:

- Amazon Web Services
- Microsoft Azure Services
- Uber

DFW Companies Aggressively Hiring

- Lockheed Martin
- JPMorgan Chase
- USAA
- Citi
- Deloitte
- Verizon
- Wells Fargo
- IBM
- NTT Data
- InfoVision

The Modern Data Center

The foundation for delivering proactive services to City residents and businesses

Fundamental Layer of Infrastructure

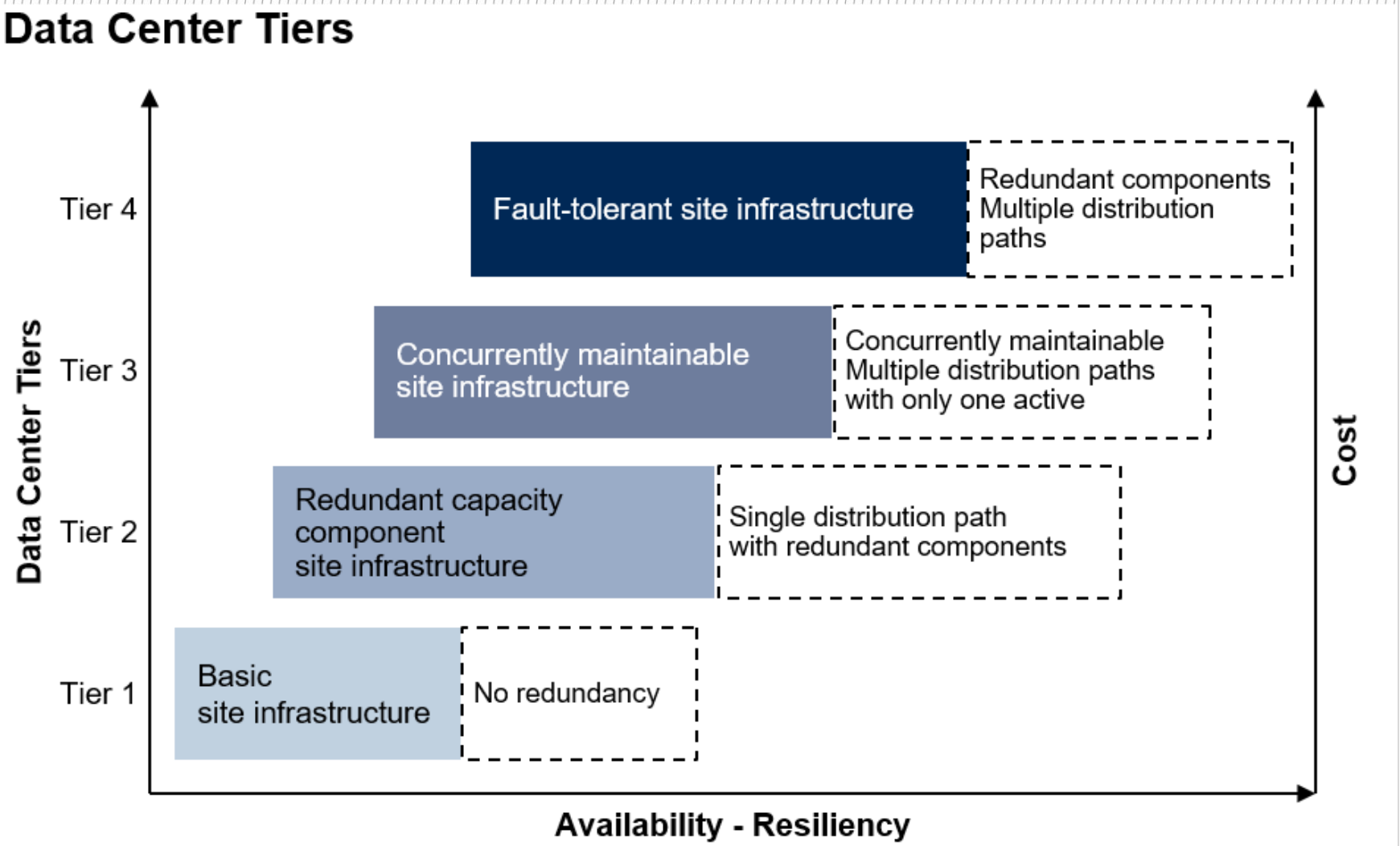
A data center maintains back-end IT systems and data stores utilizing servers, databases, network and security infrastructure

Modernization and data center transformation enhances performance and energy efficiency

A data center offers a secure environment that minimizes risk by maintaining high standards for assuring the integrity and functionality of its hosted computer environment

Designed with support redundancies to ensure continuity of operations and minimize down time.

Data Center Tier



Source: Adapted from Telecommunications Infrastructure Standard for Data Centers: ANSI/TIA-942

ID: 376103

Department of Information & Technology Services

Providing internal computing and network services to the City

Information & Technology Services

- Internal Service Fund
- Serving 40+ Departments
- Serving Over 13,000 Employees
- Regional Support Services
- 500+ Applications
- 250+ Services
- 243 Internal Employees
- $112M Annual Operating Budget

Current Data Center Operations

A 2014 assessment was conducted by an outside vendor and provided a series of recommendations to improve the reliability and functioning of the City's current data center.

The assessment provided 3 recommended options:

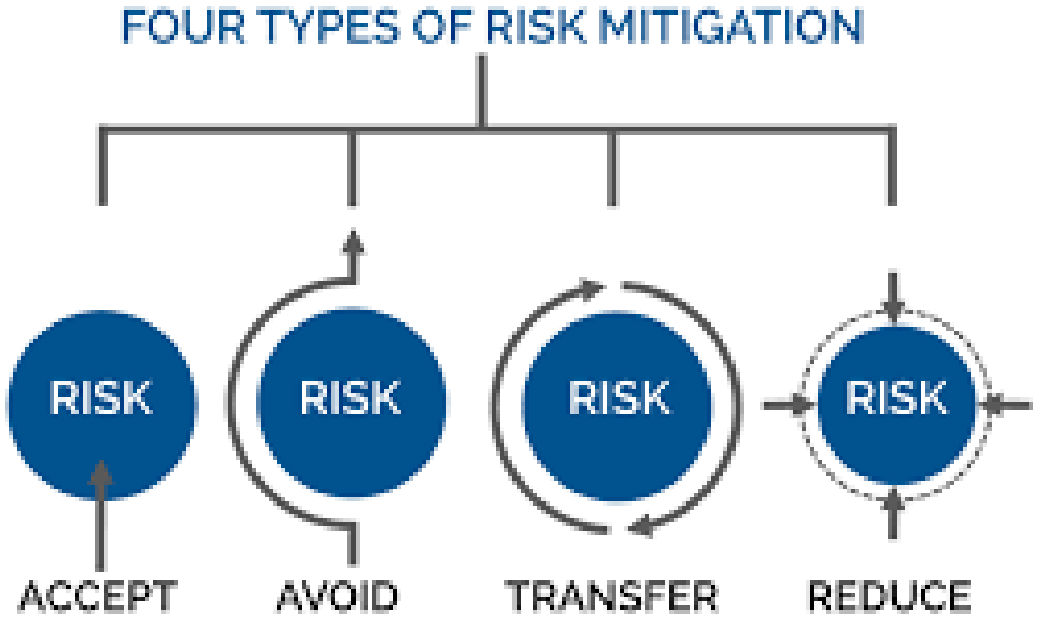
1. Update the current Data Center
2. Host a Data Center with a Firm
3. Build New Data Center off site

Data Center Remediation

At the time, the City chose to update and remediate the data center.

To date the City has spent $6.25M in remediation based upon assessment:

- Power Backups
- Cooling
- Electrical



Data Center Operations Support & Service Growth Opportunities

The unheralded technology backbone of City operations

Future City Needs

Rapidly increasing demand for new technologies and bandwidth, combined with a greater need for security to address the threat environment demands additional investment in the City Data Center.

- Virtual Council Meetings & Engagement with Residents
- Multiplatform 311 Services
- Virtual Courts
- Smart City and IoT Implementations
- Increased Use of Video
- Volume and Importance of Data

Smart City Initiatives

Our Smart Dallas vision is to be a vibrant metropolis and one of the United States' most attractive cities by 2030.

- Smart Cities Living Lab
- Environmental Sensors in support of Comprehensive Environmental & Climate Action Plan (CECAP) Plan.
- Smart Water Management
- Intelligent LED Lighting
- Bridging the Digital Divide

Projected Cost

- Datacenter with Redundant Site
  - $9,000,00 - $14,000,000 for each site for City Owned Hardware
  - Est. $1,540,000 - $2,250,000 / year for primary datacenter
  - Est. $1,540,000 - $2,250,000 / year for 100% off site replication and recovery
  - Est. $750,000 Application Rationalization
  - Est. $100,000 - $250,000 Consulting Services
  - **Est. $50,000,000 – $75,000,000 over 10 years cost**

Data Center for the Future Benefits

- An upgraded City Data Center will allow dramatically increased capability to scale to future demands of City services and initiatives.
- Increased security
- Increased reliability
- Improved response with onsite availability to equipment and staff
- Reduced overall operational risk

What's Next

- ITS asking to provide a briefing to a closed session of the full City Council to include additional information.
- ITS will conduct a comprehensive data center assessment to plan, coordinate and execute a full data center migration.
- ITS, in cooperation with Building Services Department (BSD), will continue to maintain and upgrade current Data Center as necessary.
- ITS will return to GPFM Committee to provide updates and present timelines, proposed budget and an acquisition strategy.

Questions