

# IPMA Forum 2010

## The Value in Performing Application Technical Assessments

May 2010

# Superpower Your Application



To



# Is Your Application...

- Performing Slowly
- Unstable / Crashes
- Out-of-Warranty
- Inherited

# Common Methods of Thought

- Hardware Refresh
- A Fragile Application – Do Not Touch!
- No Root-Case Determination

# Technical Assessment Benefits

- Low cost increase in performance & stability
- Prolong lifespan
- Reduce expensive upgrades
- Minimal disruption

# What is a Technical Assessment?

- Mindset
- Evaluation & Report
- Identification
- Recommendations
- Actions

# Superpower - Example 1

On-line application

- Technical Assessment Findings
  - UPDATE / INSERT statements processing iteratively
  - No multi-threading to allow for database parallel processing
  - Inefficient use of prepared statements
  - Missing primary and clustered indexes
  - Poorly designed indexing strategy

# Superpower - Example 1

## On-line application

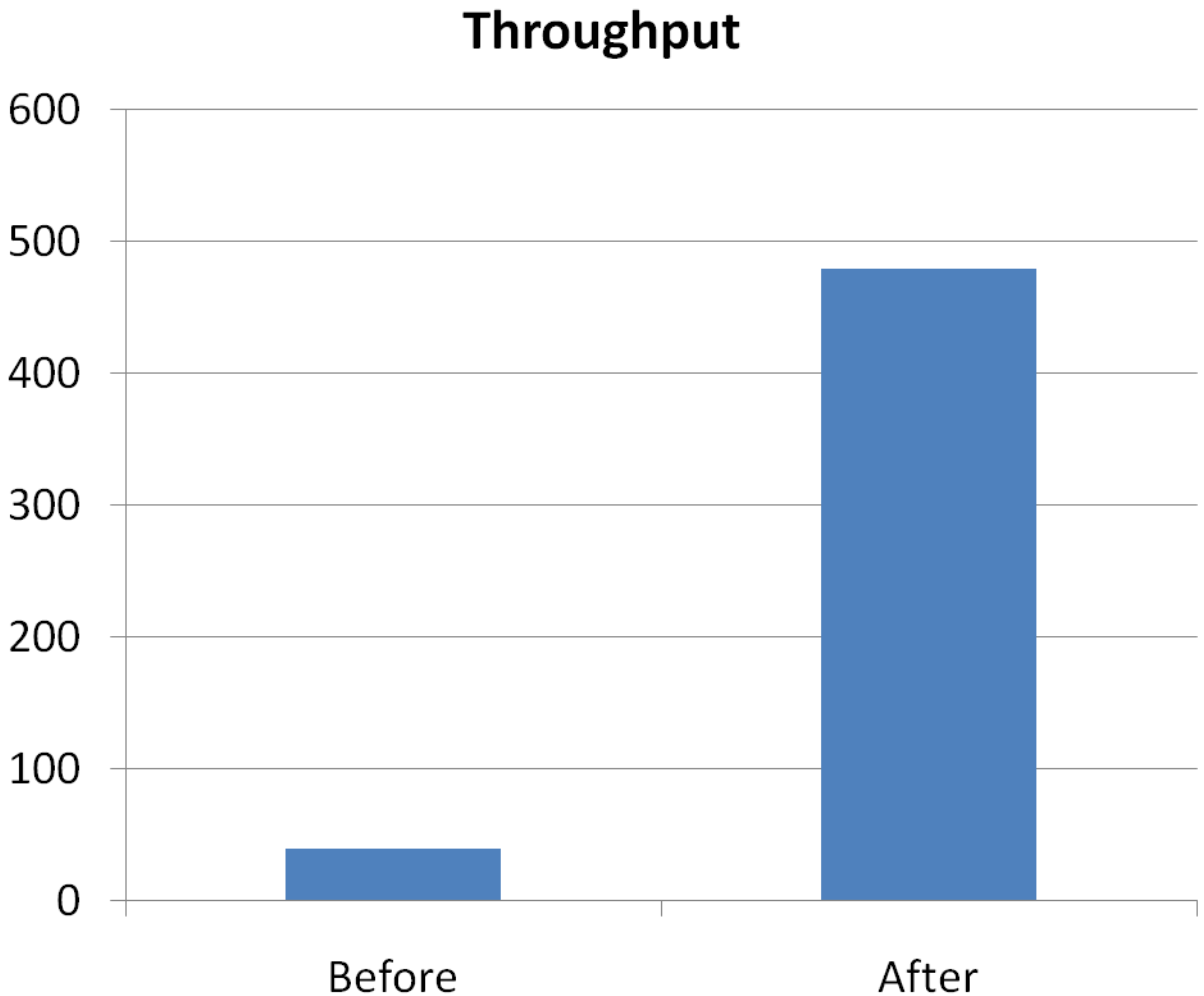
- Technical Assessment Recommendations
  - Process UPDATE / INSERT statements in batch
  - Remove auto commit, force commit in intervals
  - Alter segments of priority code to allow parallel processing
  - Enforce primary keys and clustered indexes
  - Develop an indexing strategy

# Superpower - Example 1

On-line application

Technical Assessment  
Result

Batch processing of  
**INSERT** transactions  
increased throughput by  
1200%

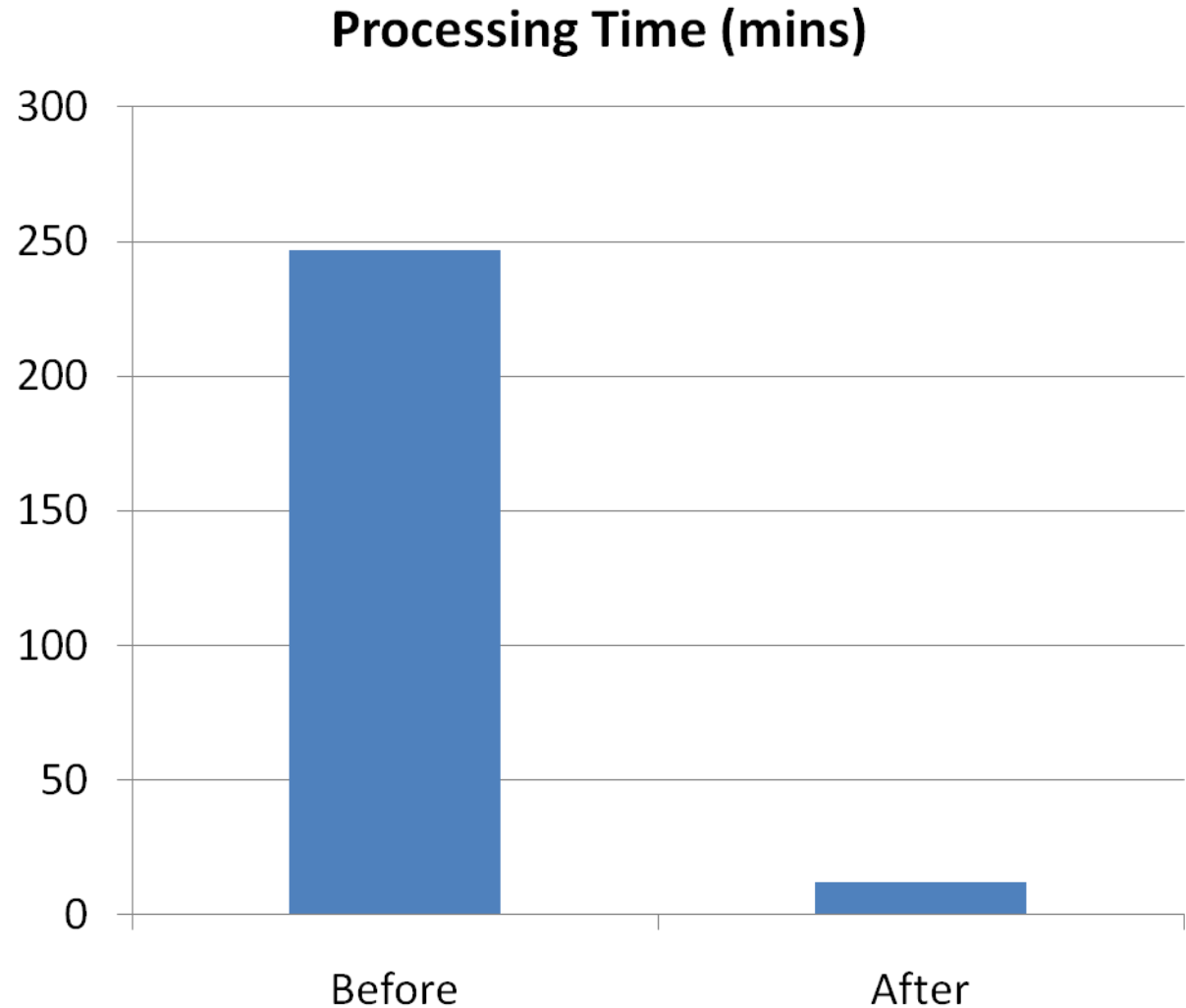


# Superpower - Example 1

On-line application

Technical Assessment  
Result

Query processing time  
dropped from 4 hours  
to 12 minutes

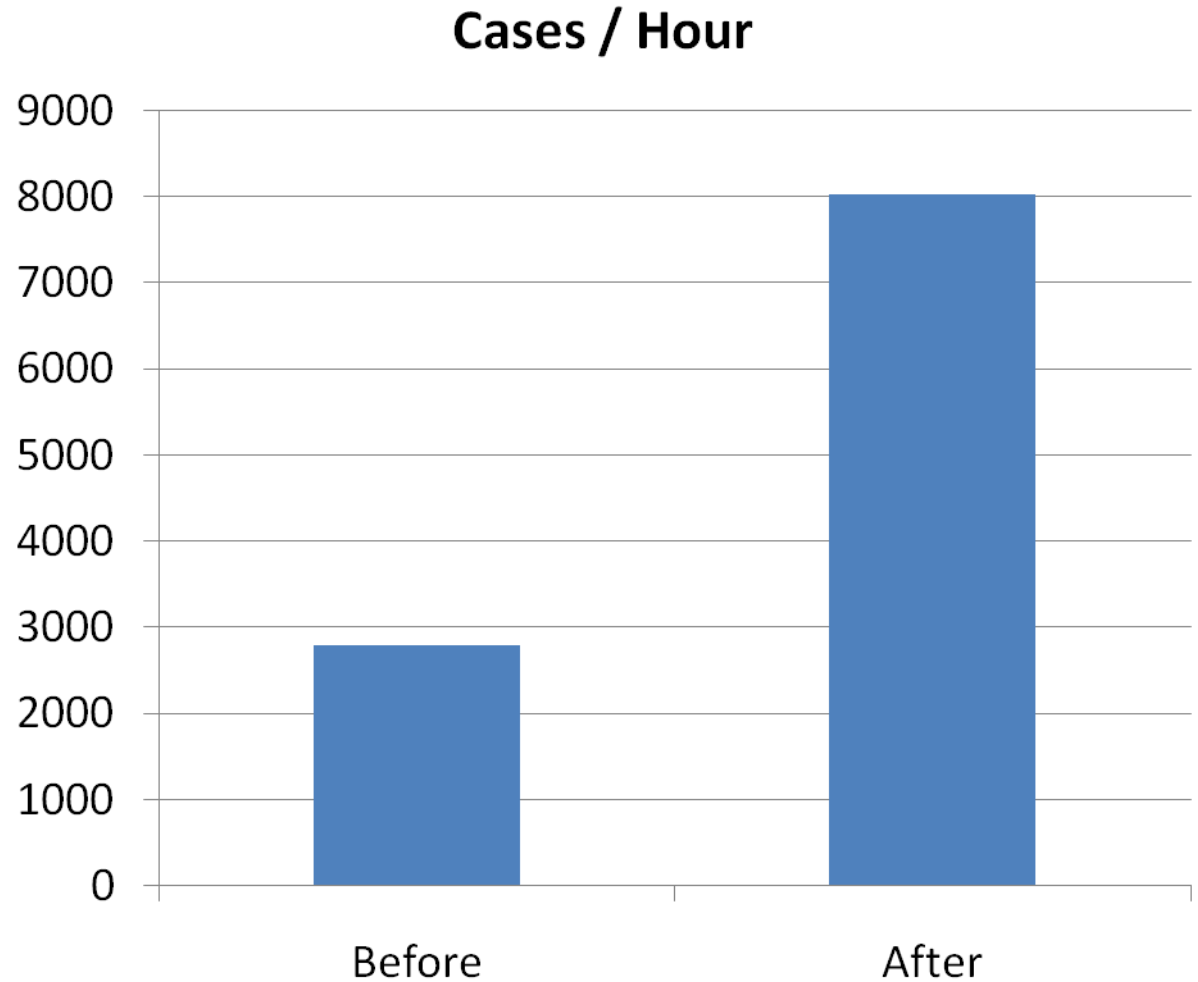


# Superpower - Example 1

On-line application

Technical Assessment  
Result

Case transactions  
increased from 2,790  
to 8,022 per hour.



# Superpower - Example 2

## Mainframe application

- Technical Assessment Findings
  - Large volume of non-operational data in the application database
  - Daily / weekly / monthly processes were manually executed
  - Pre-purchased software (toolkit) was not being used
  - 'Everything' approach to database management every week

# Superpower - Example 2

## Mainframe application

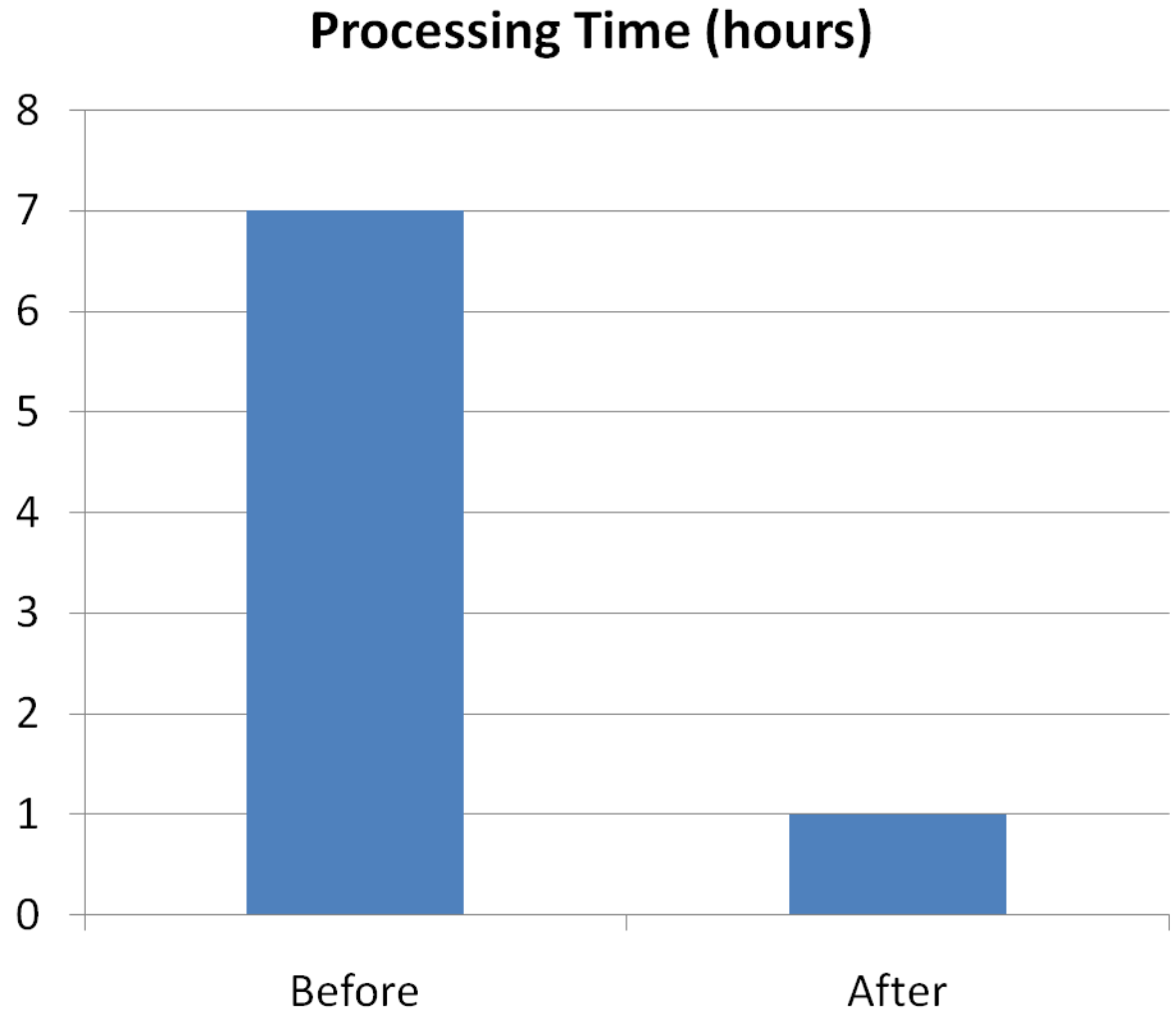
- Technical Assessment Recommendations
  - Automate processing / Use schedulers / Use alerts
  - Archive / Purge non-operational data (approx. 200M records)
  - Use the tools available to the application
  - Efficient database management

# Superpower - Example 2

Mainframe application

Technical Assessment  
Result

**Daily** processing time  
dropped from 7 hours to  
1 hour

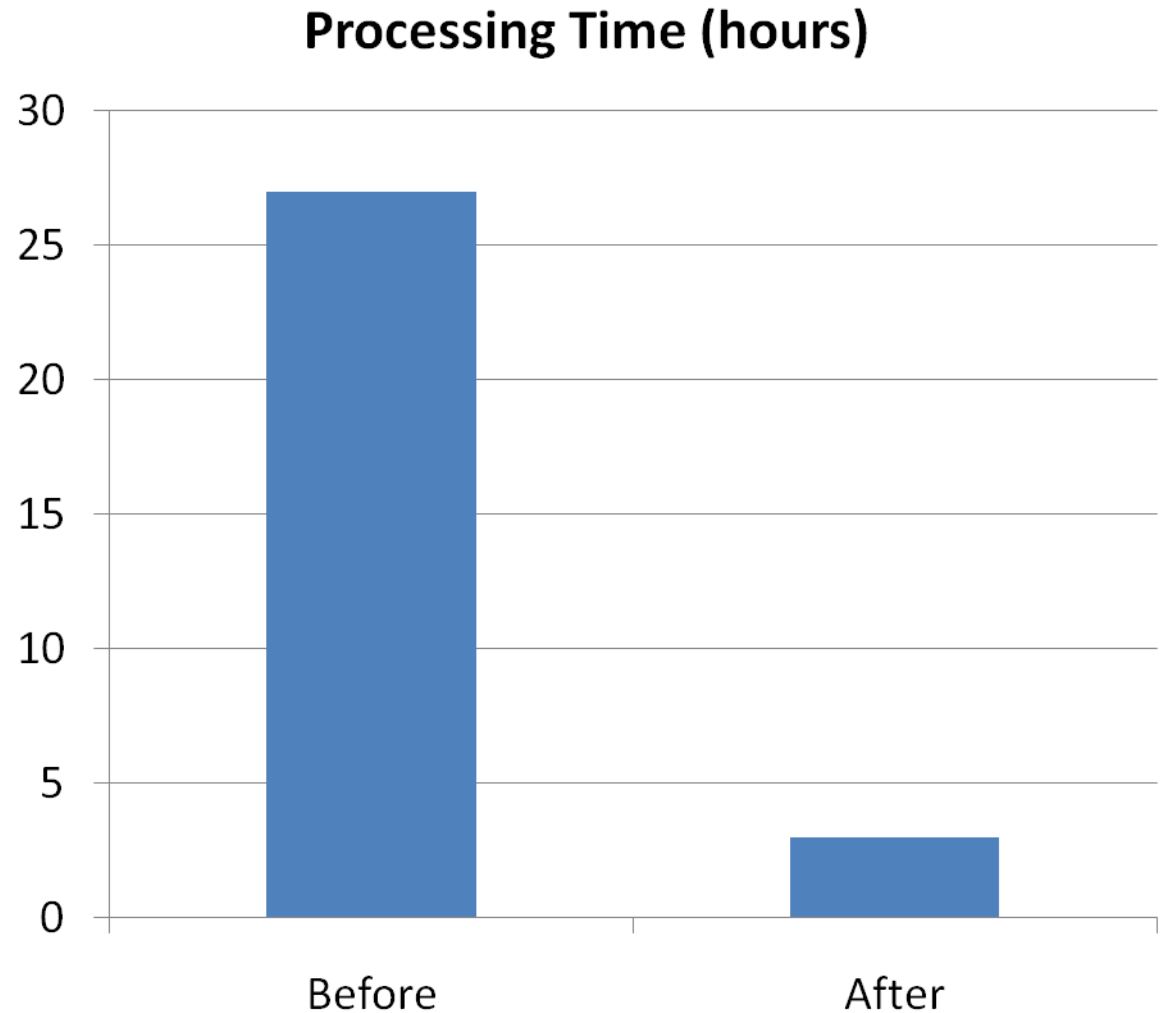


# Superpower - Example 2

Mainframe application

Technical Assessment  
Result

**Weekly** processing  
time dropped from 27  
hours to 3 hours



# Superpower - Example 2

Mainframe application

Technical Assessment

Result

**Monthly** close-out of records  
was changed to bi-weekly  
frequency

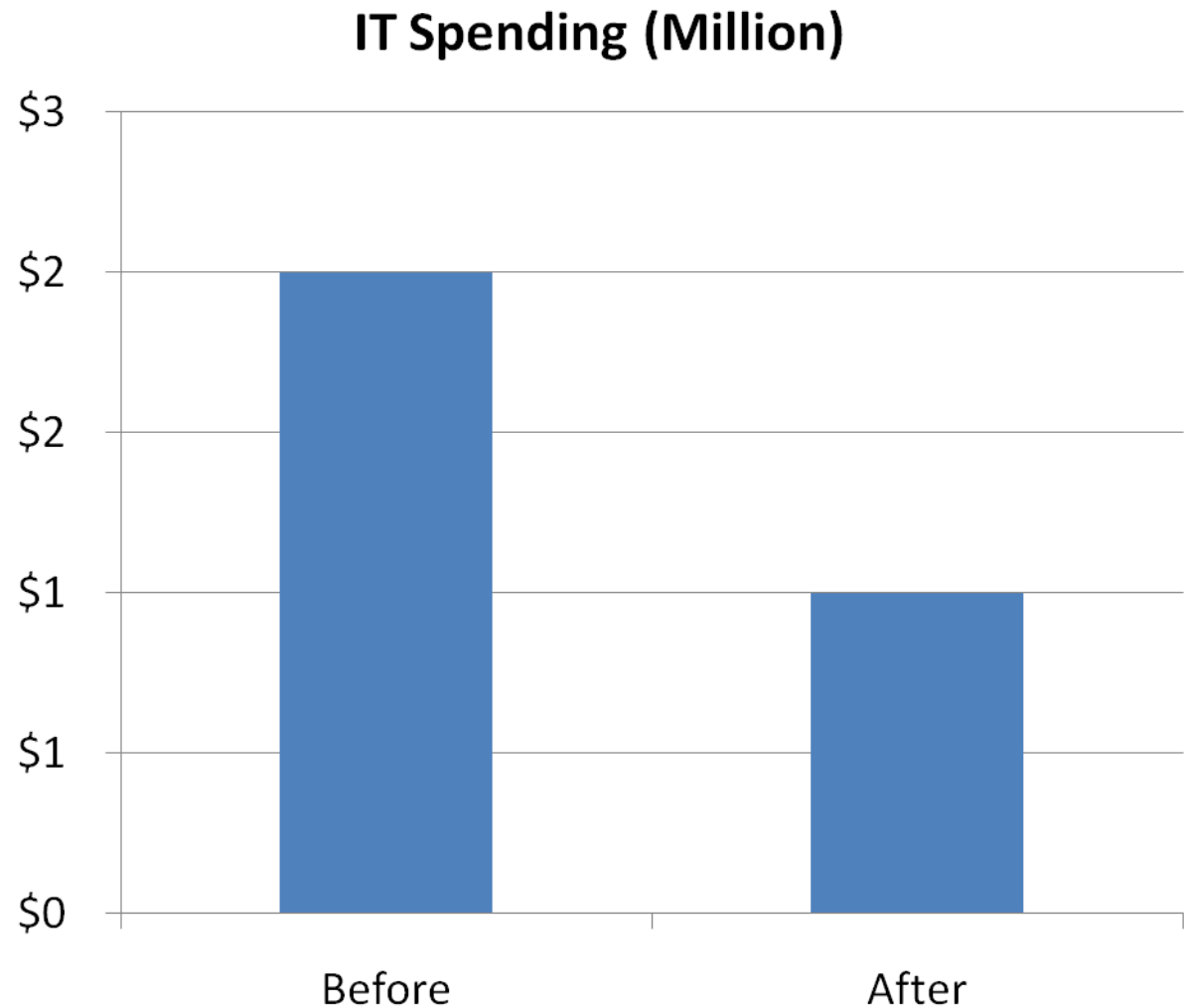
2x  
records  
processing

# Superpower - Example 2

Mainframe application

Technical Assessment  
Result

The **yearly** IT  
expenditure was reduced  
from \$2m to \$1m



# Your Application Can Do This



To



# Thank You

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