

IT Economics of new Trends on IBM z

89. zExpertenForum

Bad Horn

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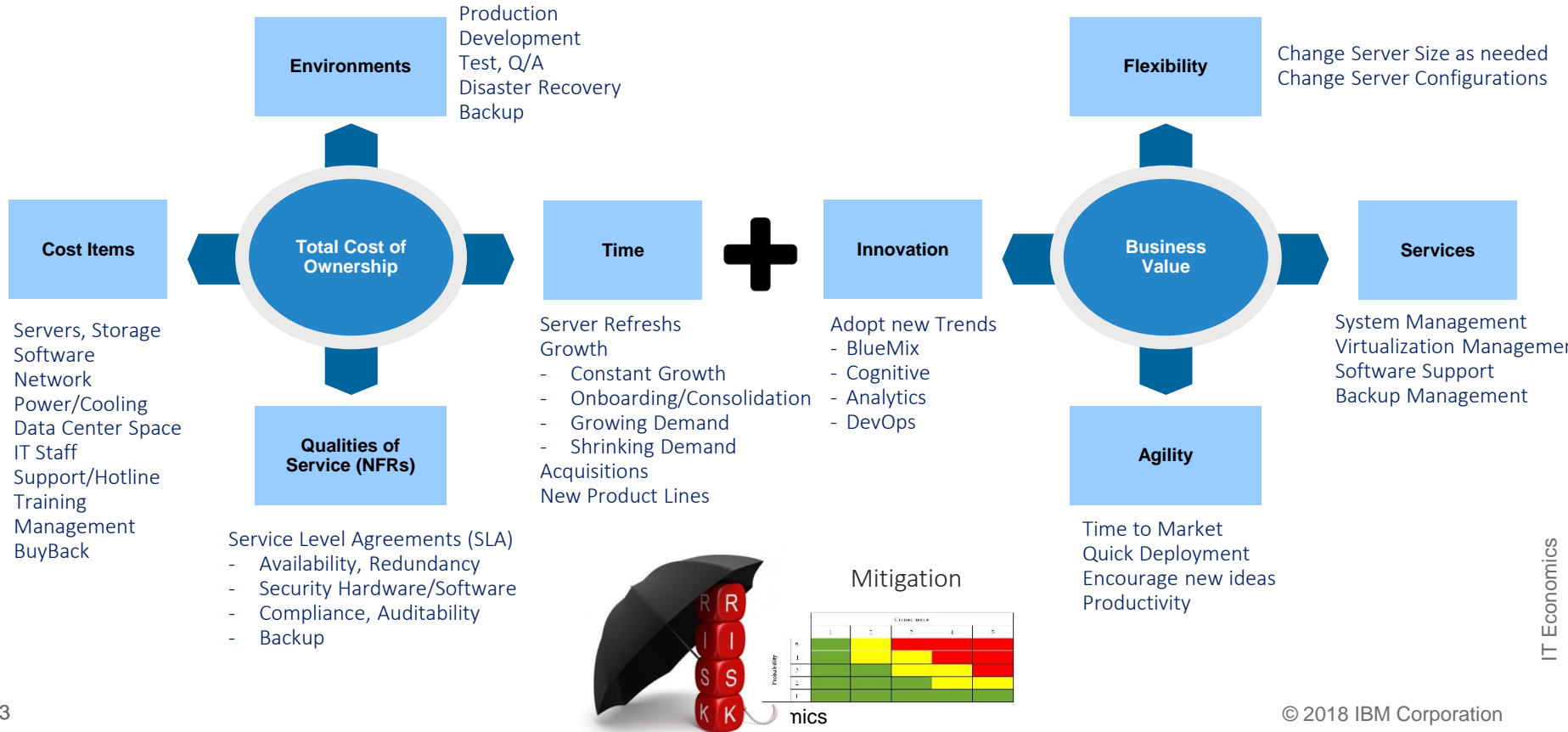


How can an IT Economics study help you?

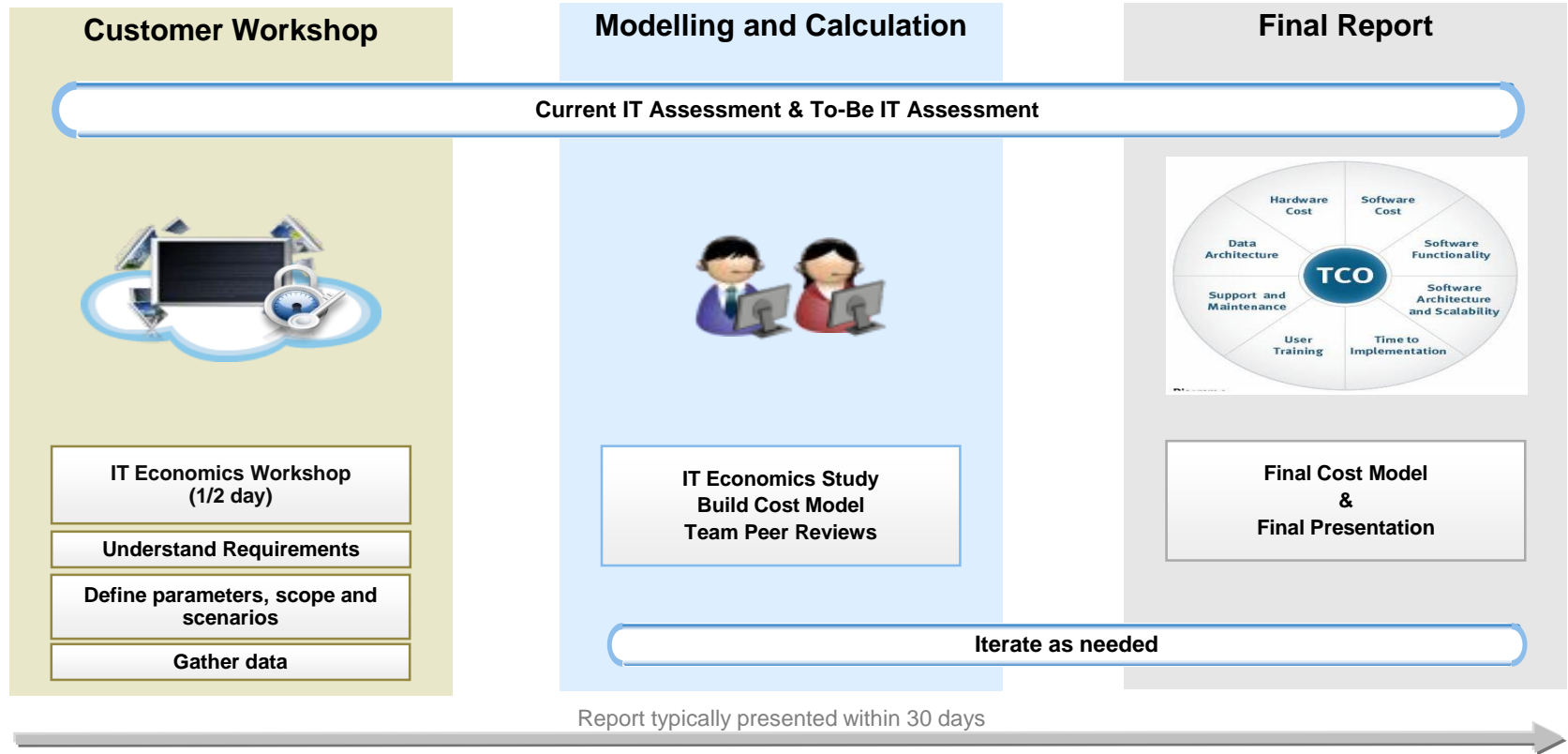
- Finding the most **effective technical solution** for your **business objectives** is essential for your company's success
- Just as important however is the **financial savings** or **business justification** to make a purchase
- An **IT Economics study** evaluates your **business values, technical requirements and costs** so you can make a financially based IT decision
- A study examines and **compares alternatives** to determine the most cost-effective solution based on
 - Business value metrics, SLAs
 - Workload activity, IT environment
 - Business and IT costs



How Cost and Value Support Strategic Decisions



IBM IT Economics Timeline



Linux on IBM Z



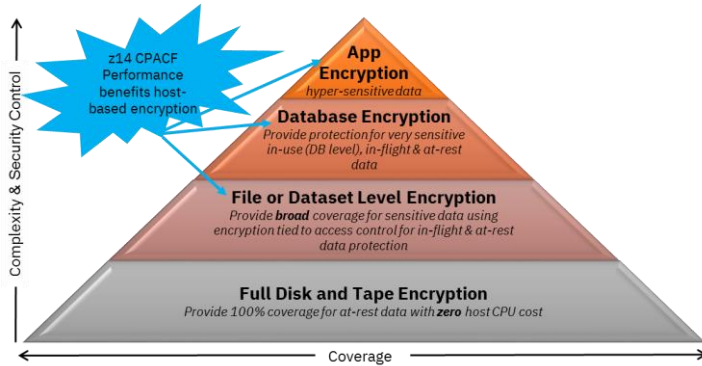
Benefits:

- Reduced software cost due higher utilization
- Lower number of cores needed due to performance and I/O subsystem
- Simplified IT operation and maintenance
- Exploit the features of IBM Z (security, reliability, resilience etc.)
- Disaster recovery at low additional costs

How IT Economics can support:

- Total Cost of Ownership
 - Comparison of Linux on IBM Z with other platforms, e.g. x86/Cloud
 - Show savings in terms of SW licence and operational costs
 - Identify opportunities for application consolidation and modernization

Pervasive Encryption on IBM Z



How IT Economics can support:

- Savings with z14
- MIPS Overhead vs Benefits
- Business Value Assessment
 - Risk Avoidance
 - Compliance Cost
- Comparison to x86

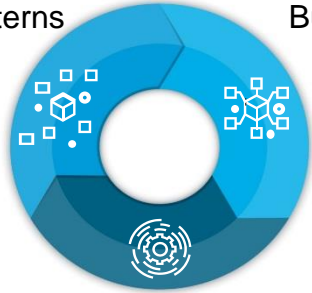
Benefits:

- Higher Security/Lower Risk
- No Application Changes
- No Effort for Selective Encryption
- Reduced Cost for Compliance
- Low Overhead
- No extra Point Solutions required

Machine Learning on IBM Z

Identify Patterns

*not readily
foreseen
by humans*



Build Models

*of behavior
from those
patterns*

Make Prediction

With the deployment model

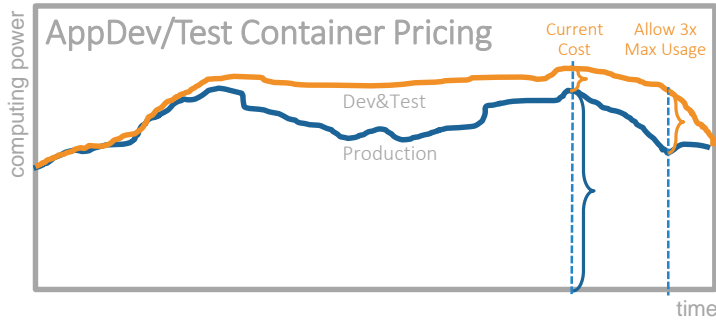
Benefits:

- Improved quality of predictions and real-time analytics running machine learning close to transactional databases
- Higher data security by keeping critical data contained within IBM Z
- Excellent availability and scalability

How IT Economics can support:

- Business Value Assessment
 - Build specific use cases relevant to the business owners using predictive analytics and real-time transactional scoring
 - Understand client's needs for improving time to value and drive business
- Comparison to x86/Cloud
 - Assess alternative scenarios
 - Quantify business value

Application Development & Test Container on IBM Z



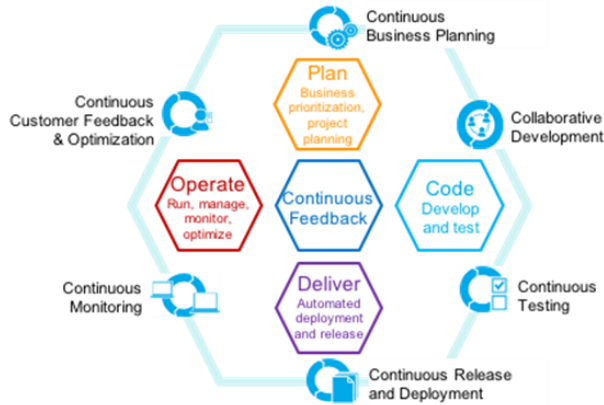
Benefits:

- Agility in application development and test
- Use all available IT resources without cost concerns
- Flexibility in investigating new trends
- Adoption of DevOps
- Eased chargeback within the organisation
- Simplified IT operation

How IT Economics can support:

- Total Cost of Ownership
 - Comparison of new Dev/Test Container on IBM Z vs. Existing MIPS/MSU Pricing
 - Show savings in terms of SW licence and operational costs
 - Comparison to other alternative solutions

DevOps on IBM Z



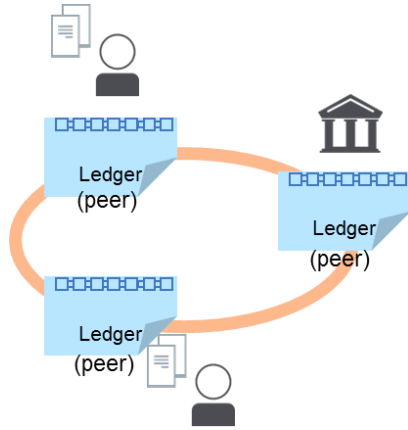
Benefits:

- Strategic Business Advantages by improved ability to drive change and innovation
- Operating Efficiencies through reduced process cycle times
- IT Cost Reduction with improved IT staff productivity

How IT Economics can support:

- Business Value Assessment
 - Business transformation through faster development of innovative software that meets emerging business needs
 - Improvement in operational metrics around cost, risk, quality, productivity and speed in the development cycle
 - Closer collaboration between line of business, development and IT operations
- Total Cost of Ownership
 - Savings through DevOps on IBM Z and comparison to alternative solutions

Blockchain on LinuxONE



Benefits:

- High Security (SSC, HSM)/Low Risk
- Performance
- Availability
- Scalability
- B2B Process Efficiency

How IT Economics can support:

- Business Value Assessment
 - Risk Avoidance
 - Process Savings
 - Availability
- Comparison to Cost for Traditional Business Network
- Comparison to x86/Cloud

European Life Insurance chooses IBM Z over x86 for their core business application due to better performance and lower cost

Client Situation

A European life insurance company is running their core pension plan applications on IBM Z. They were comparing the cost of their current CICS/COBOL/DB2 application to the alternative of migrating them to Java on x86. The applications are written in CA Gen 4th generation language which can produce code for different platforms.

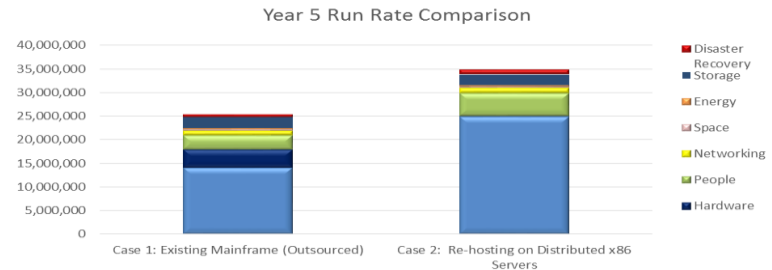
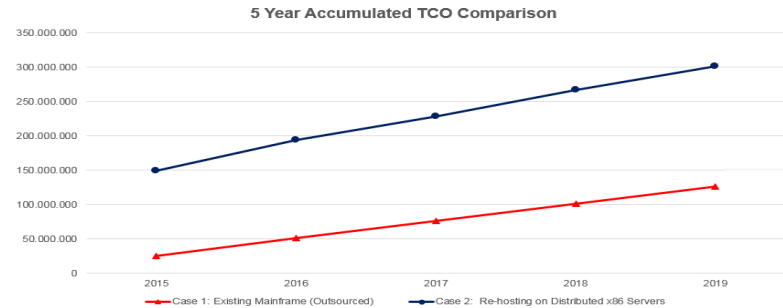
Solution

- IBM Z has a lower annual run rate than the alternative Intel x86 environment
- Even excluding migration cost and parallel systems during migration the economy of scale allows for lower operational costs on IBM Z as compared to Intel x86.
- Cost savings achieved by using latest IBM Z technology

5-Year TCO for existing z/OS solution on outsourced IBM Z vs. own x86 server environment

Benefit

- Savings of \$16M over five years when staying on IBM Z as compared to a distributed environment



Source: IBM IT Economics study

Government Agency chooses IBM LinuxONE Emperor over x86 to reduce IT spend on Oracle DBs

Client Situation

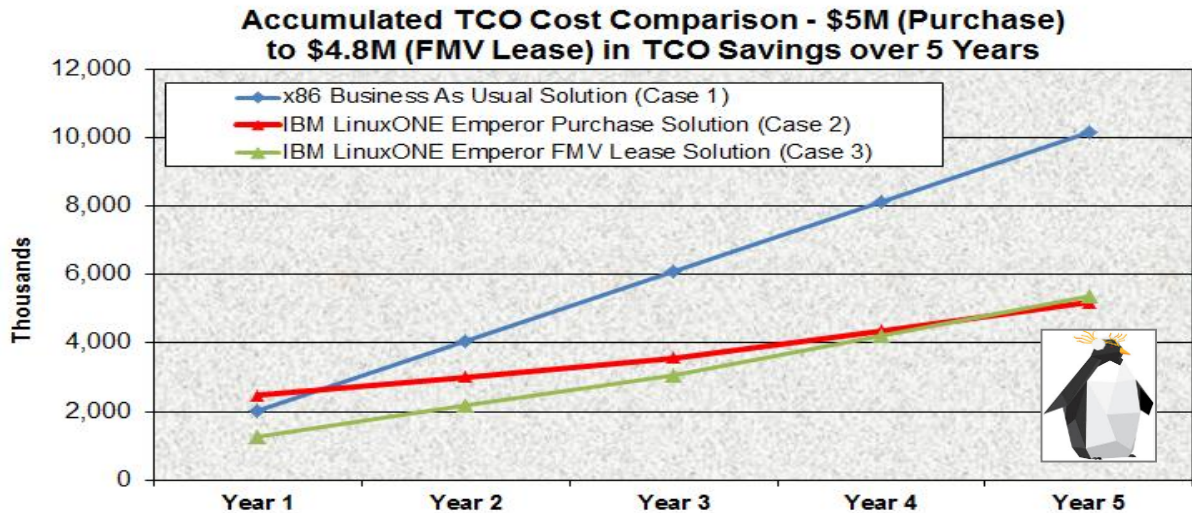
A U.S. Government Agency was looking for cost reductions. Its existing distributed Oracle environment drove significant cost in terms of core based SW licensing and systems administration effort.

Solution

- Use either LinuxONE Emperor scenario to reduce TCO by **50%**
- x86 SW charges over five years alone are more than LinuxONE TCO (\$10M x86 SW vs. \$5.5 LinuxONE Emperor TCO)
- Second largest cost driver in x86 TCO is labor for server administration

Benefit

- Smaller server footprint requires less floor space, network and energy
- Fewer images decrease server maintenance overhead (fewer patches, updates), increasing labor bandwidth for new IT projects by **~40%**



Scenarios Considered

- Existing Oracle database x86 solution (39 servers / total 396 cores)
- IBM LinuxONE Emperor purchase to use 17 IFLs
- IBM LinuxONE Emperor fair market value (FMV) lease to use 17 IFLs

Thank you!