

# **VM Workshop 2011**

## ***Timeless Tips For IT Pros***



*Presented by:*

**Bill Carico**

**ACTS Corporation**

**<http://www.actscorp.com>**

**(see also [www.x4.com](http://www.x4.com))**

**bcarico@actscorp.com**

What ~~sh~~<sup>w</sup>ould you do if  
attacked by an  
anaconda?

**An anaconda is a relative of the boa constrictor, can grow to 35 feet in length, and weigh between 300 lbs. and 400 lbs.**



# Improving IT's chances for Success

**Beware of vendor promises. Always check references, then ask the references for references.**

**Beware of those who live on the *reading edge*.**

**Beware of highly publicized technology projects.**

**Avoid management by magazine**

***"Skepticism is the first step toward truth."***

***Diderot (1713-1784)***

# **ACTS and the Gov of Canada**

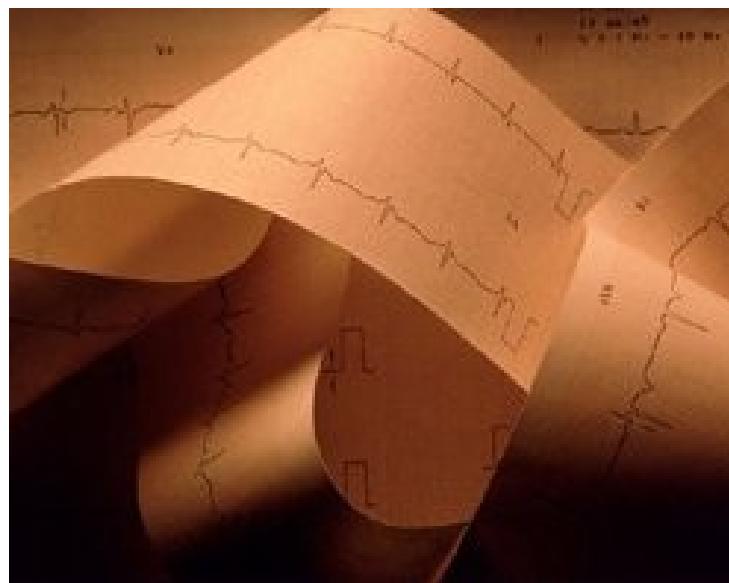
**Once showed them how to save \$56M...**

**Which led to more frequent engagements...**

**Including asking me to predict mainframe viability in ten years.**

# 5 Point Viability Assessment

How healthy is the technology?



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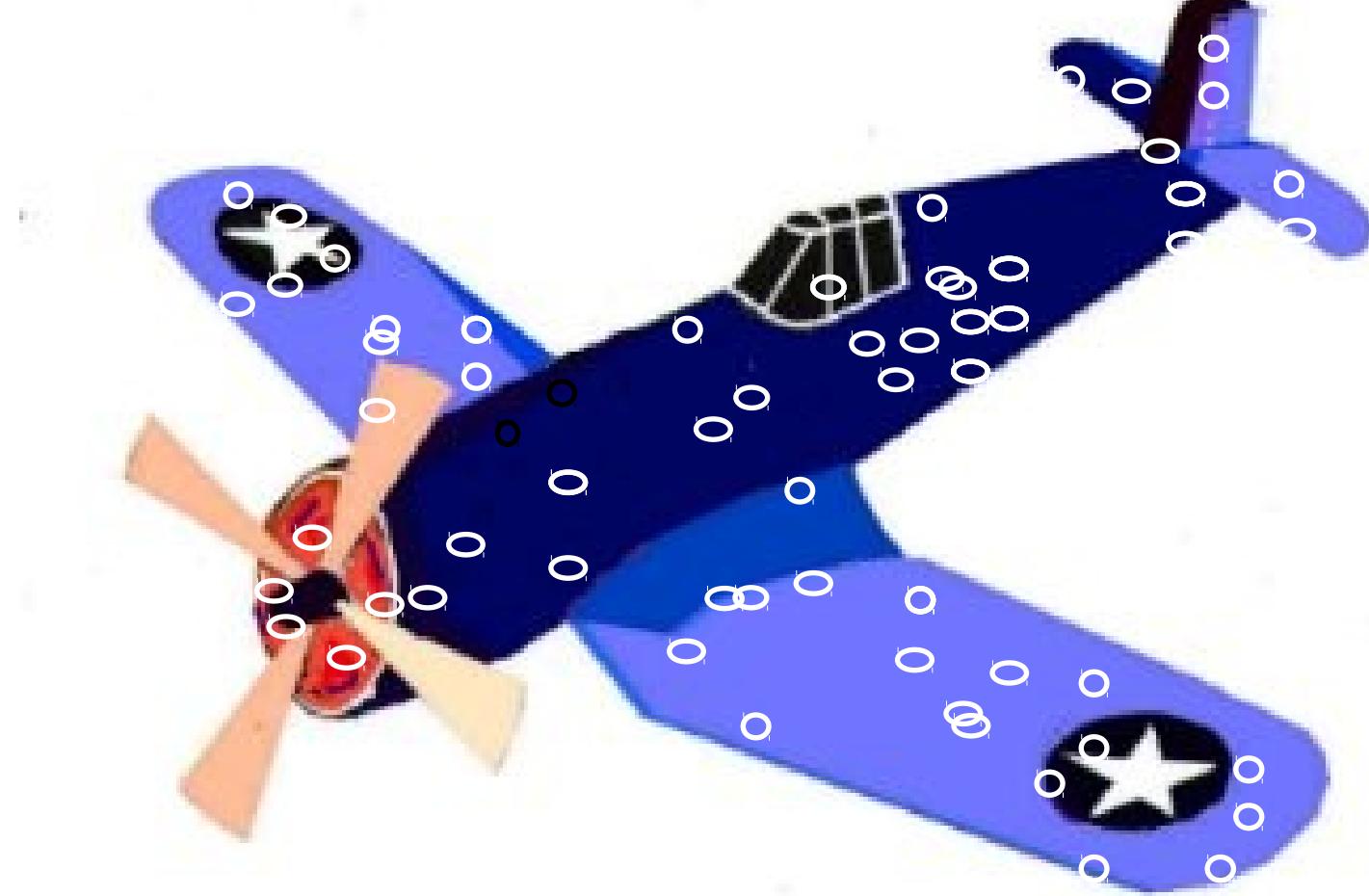


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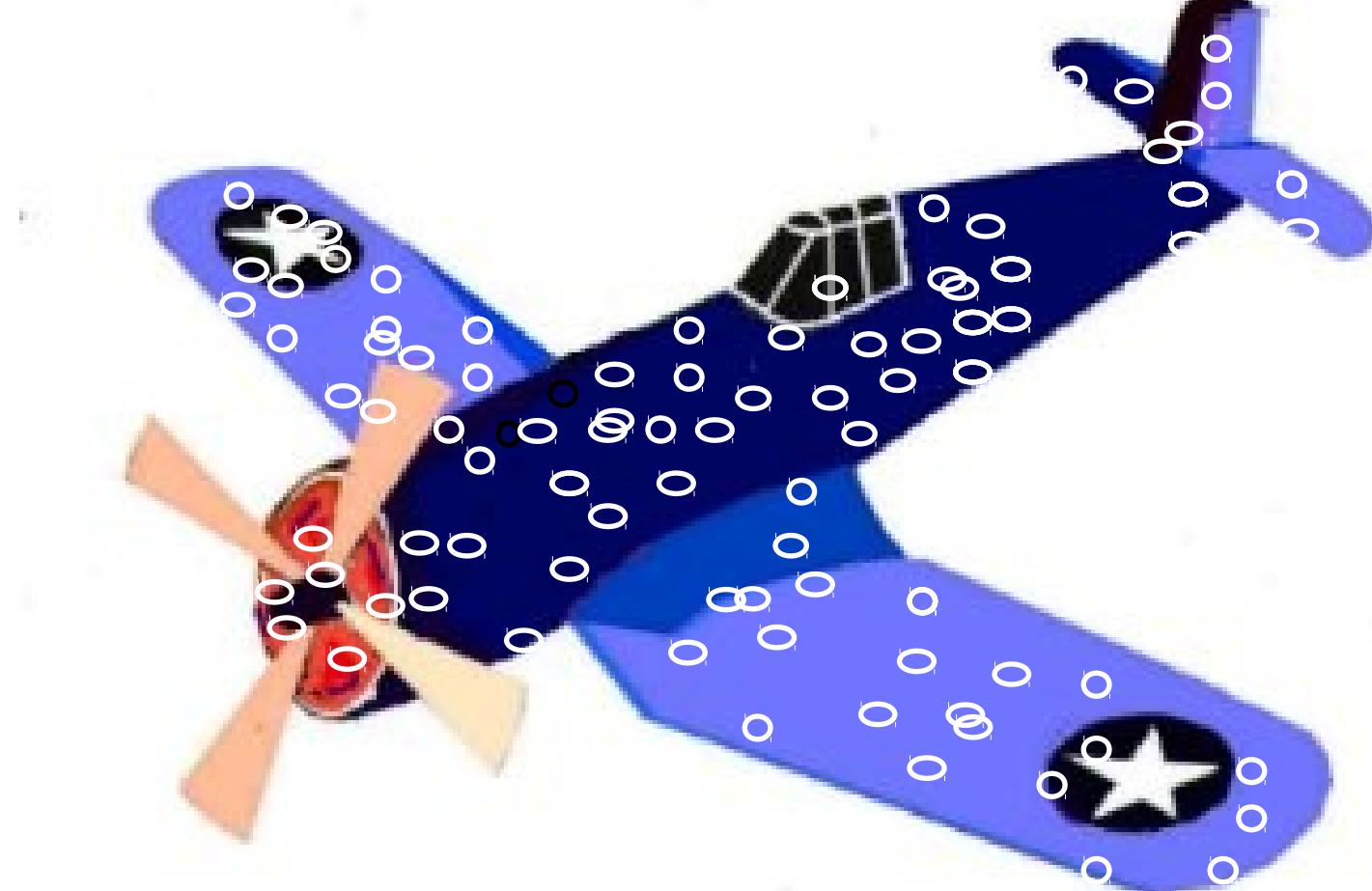


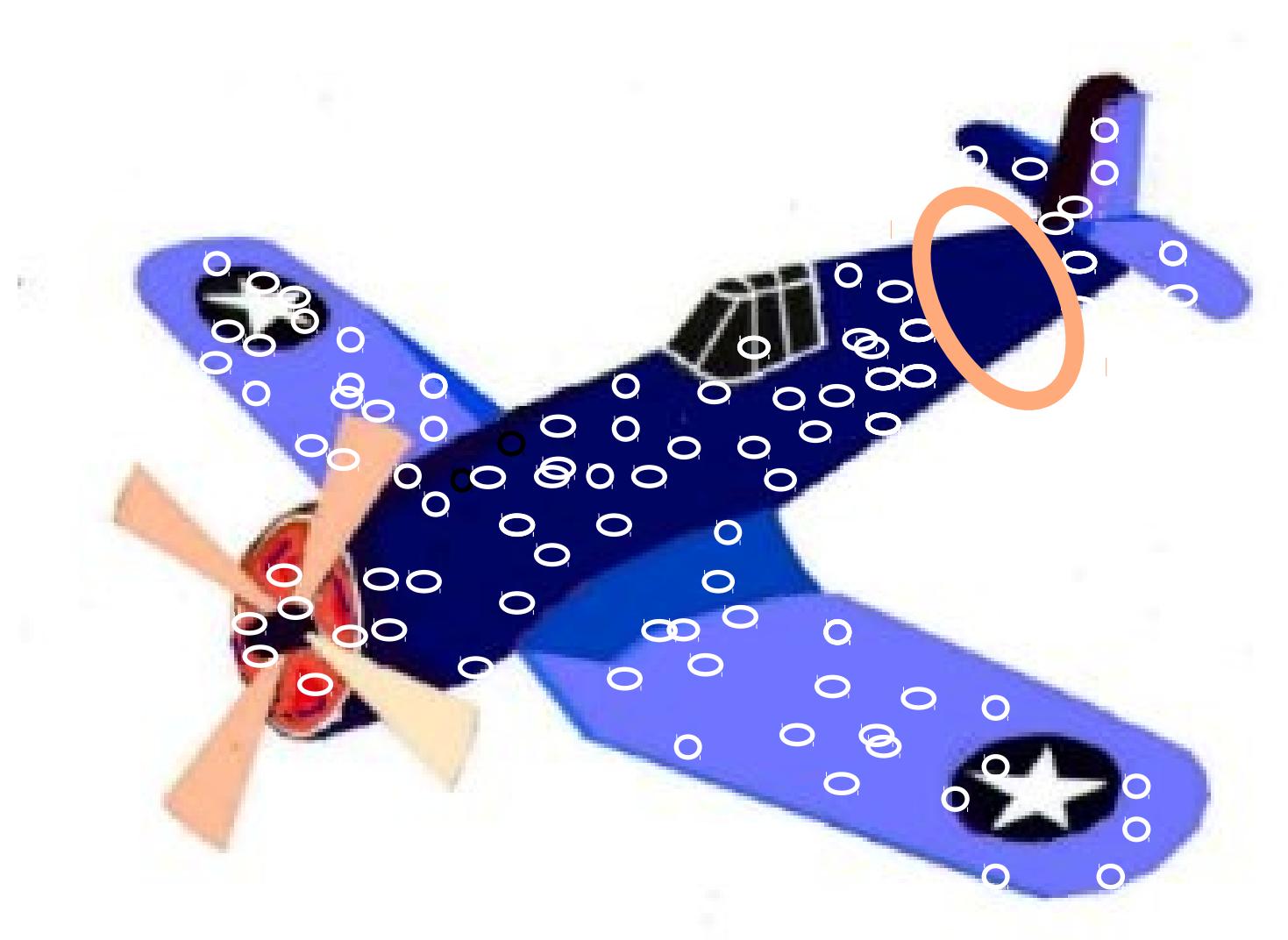
**Too many planes getting shot down. Who would know best as to where to add 100 lbs of plate armor?**





A stylized illustration of a flag with horizontal stripes of blue, white, and blue. In the center is a dark blue rectangular area containing a white five-pointed star. A thin black border surrounds the central emblem. The flag is set against a white background.





# To Illustrate the Point

Sherlock Holmes and his associate, Dr. John Watson, went on a camping trip. As they lay down for the night, Holmes said: "Watson, look up into the sky and tell me what you see".

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**"I see millions and millions of stars".**



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Holmes: "And what does that tell you?"

Watson: "Astronomically, it tells me that there are millions of Galaxies and potentially billions of planets. Theologically, it tells me that God is great and that we are small and insignificant.

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What does it tell you, Holmes?"



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Holmes: "Somebody stole our tent."



# Common Sense?



- ☒ **The school bus vs. the economy car**
- ☒ **Cafeteria vs. microwave in every office**
- ☒ **747 vs. the Lear Jet**
- ☒ **Electric utility vs. home generators**
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- ☒ **Servers vs. PCs vs. handheld**



# Mainframe Pain Points

Costs

Lack of skills

Lack of applications

Lack of ISVs

*Other:*

---



Are any of these life threatening?

# Cost of Ownership

- ✓ Total Cost of College analogy
- ✓ TCOC studies
- ✓ Look deeper: vendor comparisons could be against older or mismatched technology
- ✓ Beware of benchmarketing
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# Mainframe Costs

**Industry claims: based on an analysis of actual IT spend and business performance comparing companies with a greater than average mainframe mix vs. less than average mainframe mix, customers may see<sup>1</sup>:**

- 33% higher Server-based computing platform costs vs. mainframe-based computing costs

## **Retail**

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## **Healthcare provider**

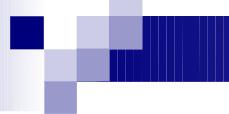
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# Mainframe Scalability

- **zEnterprise Unified Resource Manager and the z196 are expected to manage up to 100,000 virtual servers.**  
(IBM calculations of zManager limits across maximum z196 configuration. Results may vary)
- **Scale out to trillion of instructions per second: zEnterprise BladeCenter® Extension (zBX) + zEnterprise 196.** (IBM Internal analysis)

# Mainframe Scalability

The zEnterprise 196 delivers the world's most efficient virtualization designed to support over 13,000 Virtual Machines per Server and over 100,000 Virtual Machines in a cluster (Ensemble):

CEC cores	80
Max guests/core	60
Total CEC VM's	<b>4,800</b>
zBX Power Blades	114
Cores/blade	8
AIX images/core	10
zBX VMs total	<b>9,120</b>
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# Mainframe Apps

As of 1H 2011:

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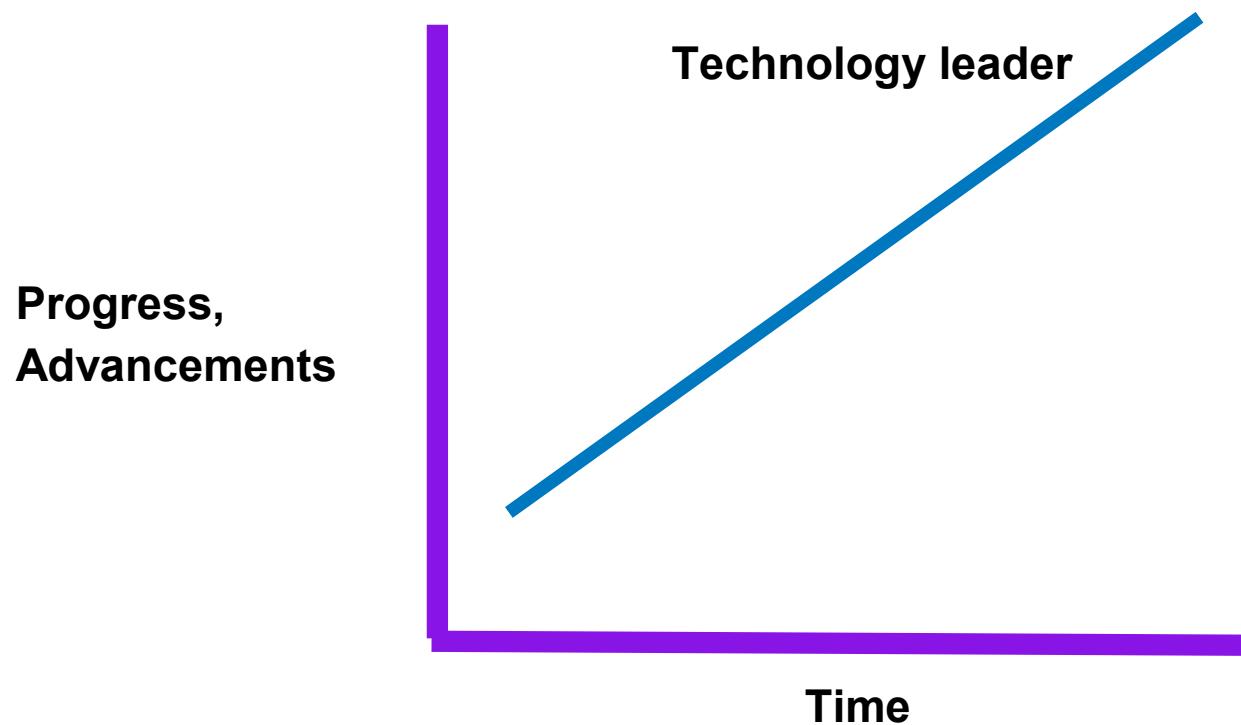
- *z/OS:*
  - Over 4,000 total z/OS applications
  - Over 275 new or upgraded applications for z/OS in 1H'11
  - More than 2,500 total applications on z/OS V1.9 and later
- *Linux on System z:*
  - 3,000+ total Linux applications
  - Over 185 new or upgraded applications for Linux on System z in 1H'11

# Mainframes and Edu

School enrollments grew significantly from 24 schools in 2003 to 737 schools in 2010, reaching students in 61 countries (more than half outside the US).

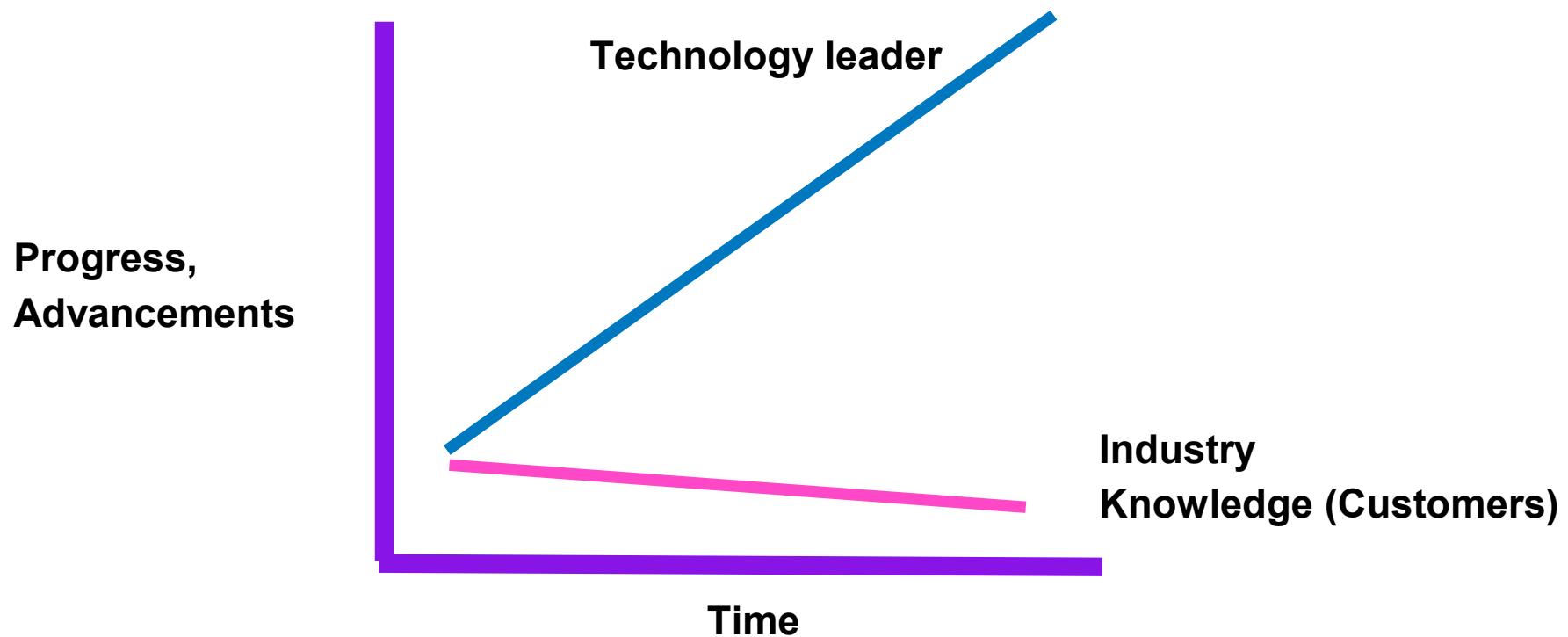
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# A Big Part of the Problem



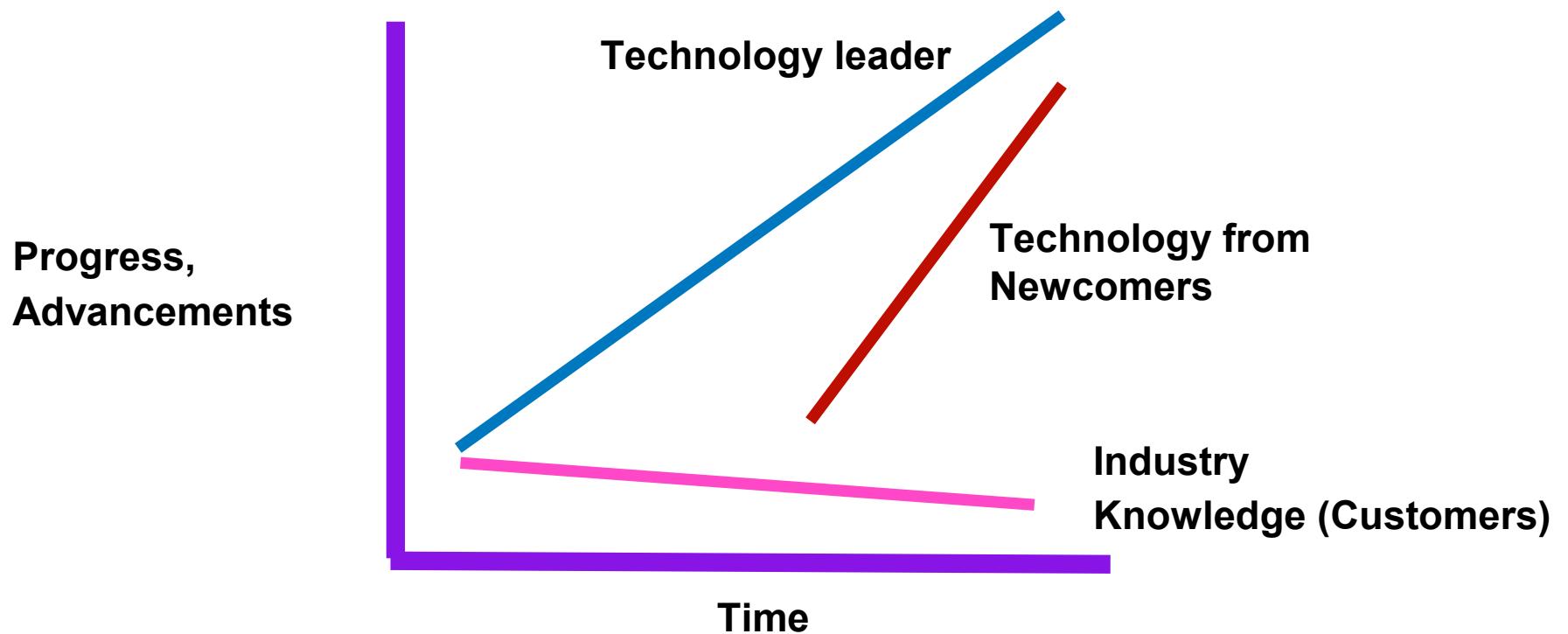
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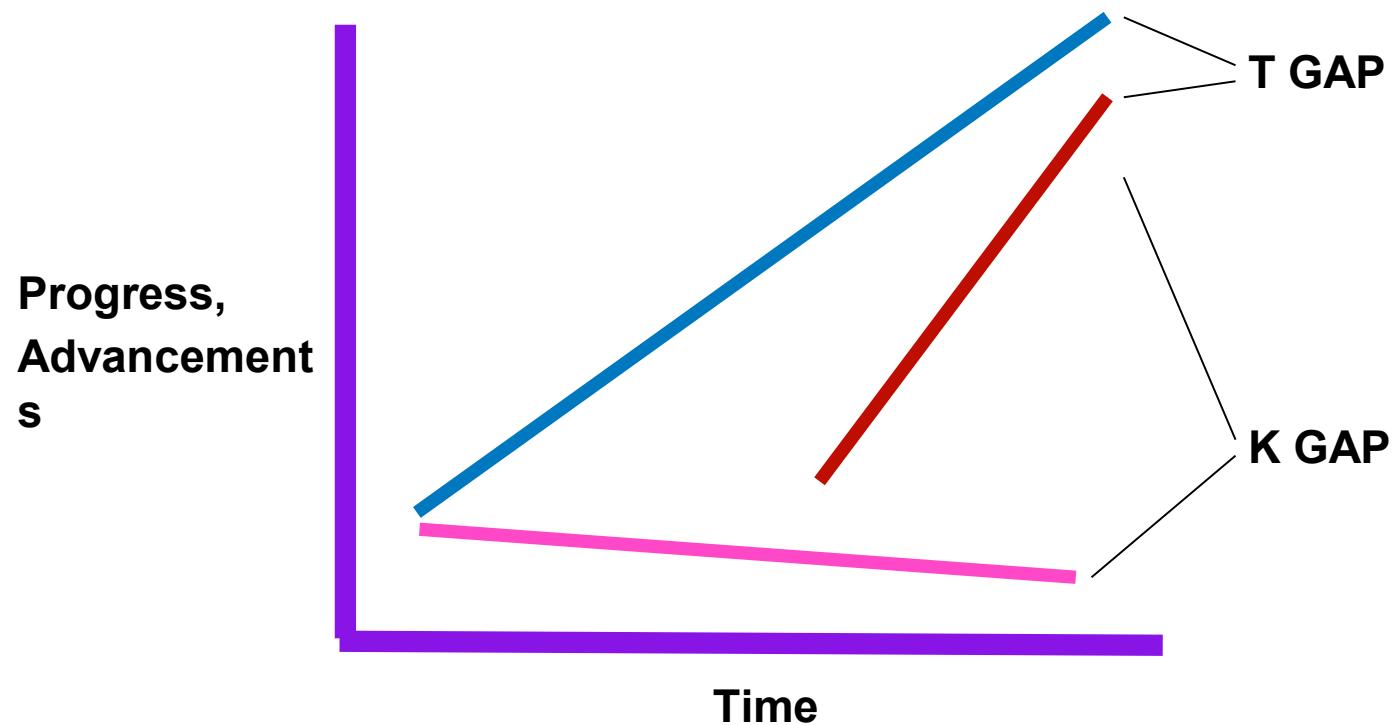
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# The Gaps

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**Customers, Vendors, Journalists,  
Consultants, Analysts**

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**Scalability is  
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C \_\_\_\_\_ GAP

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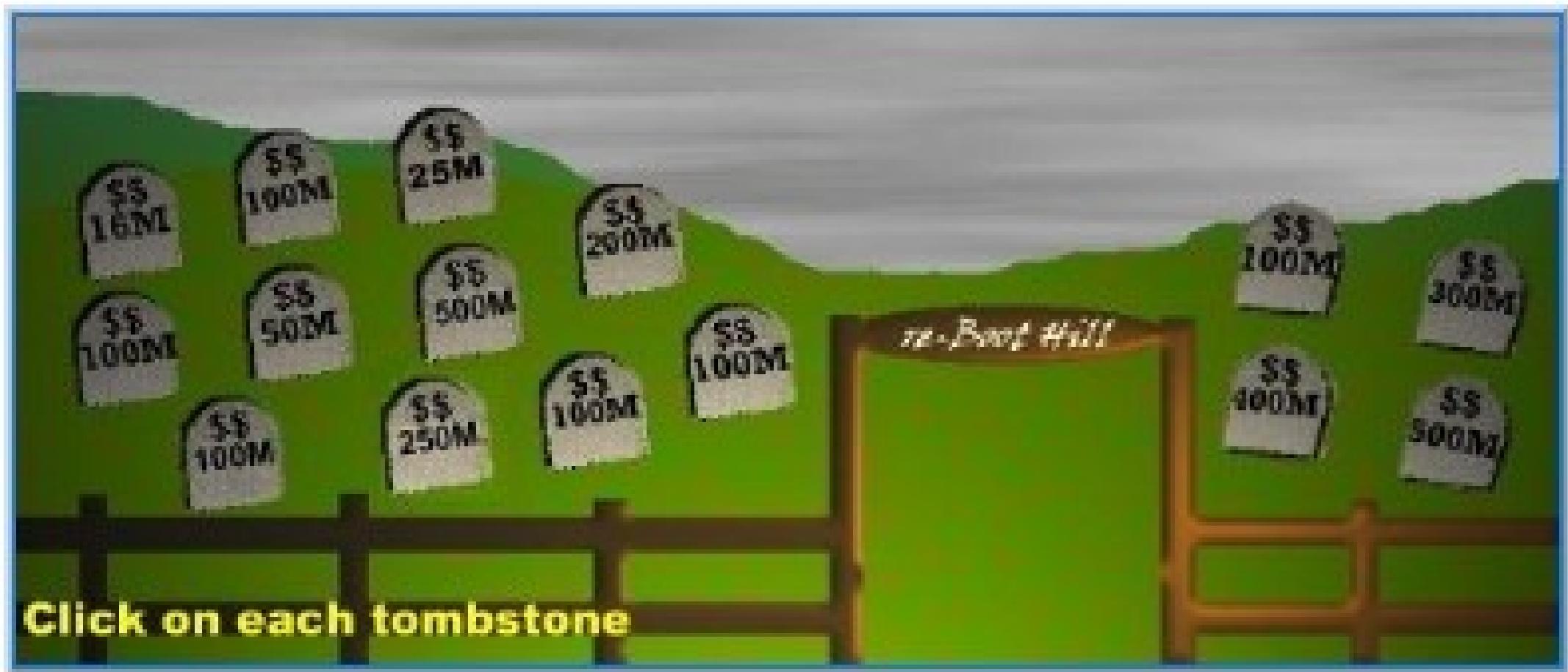
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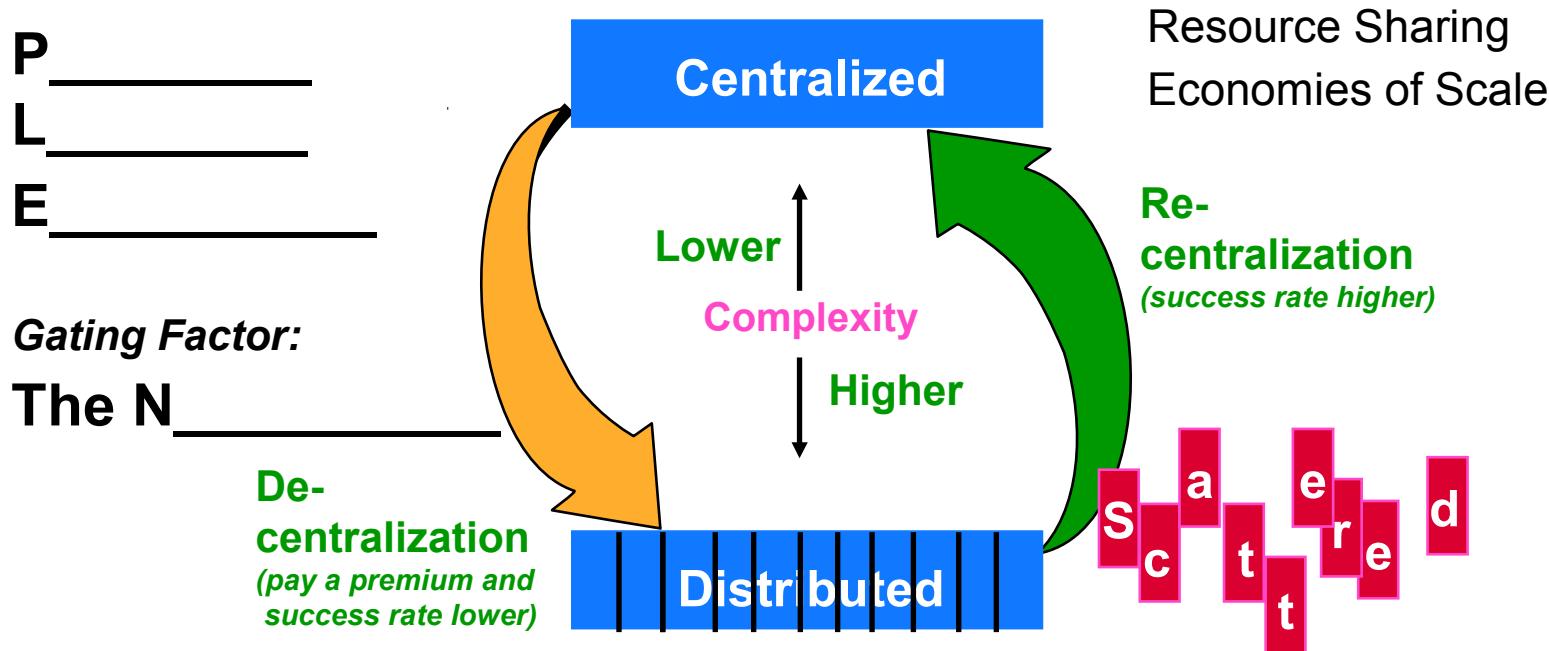


# Reboot Hill



# Why Consolidation works

**Centralized | Decentralized |  
Scattered**

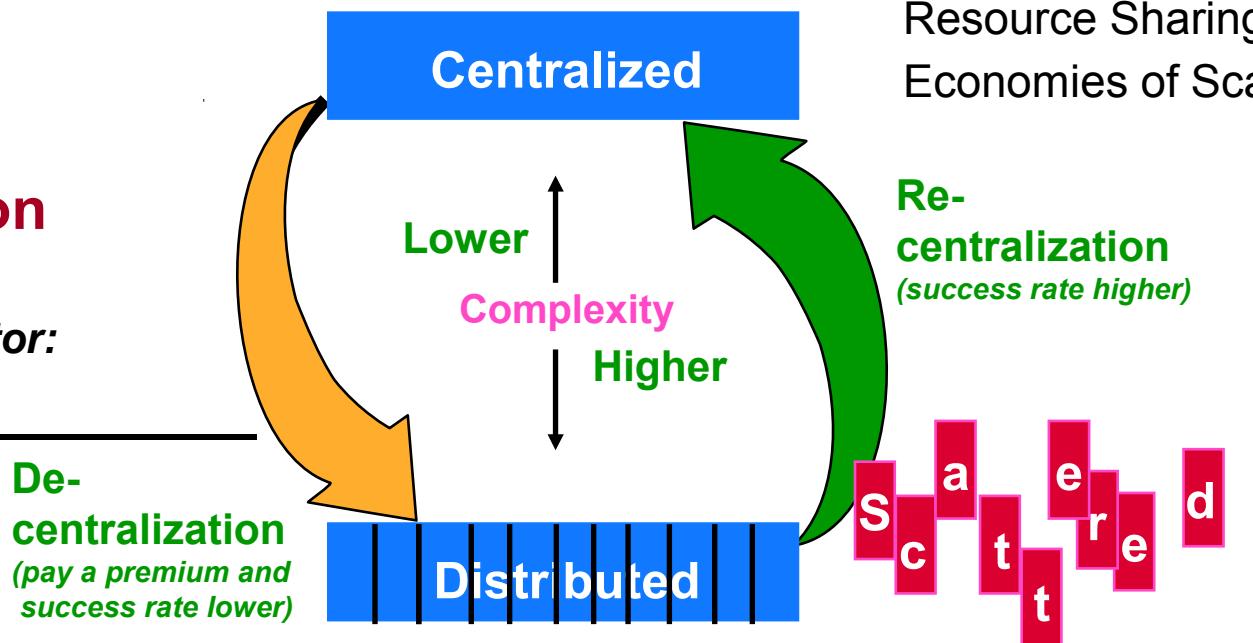


Applies to organizations and  
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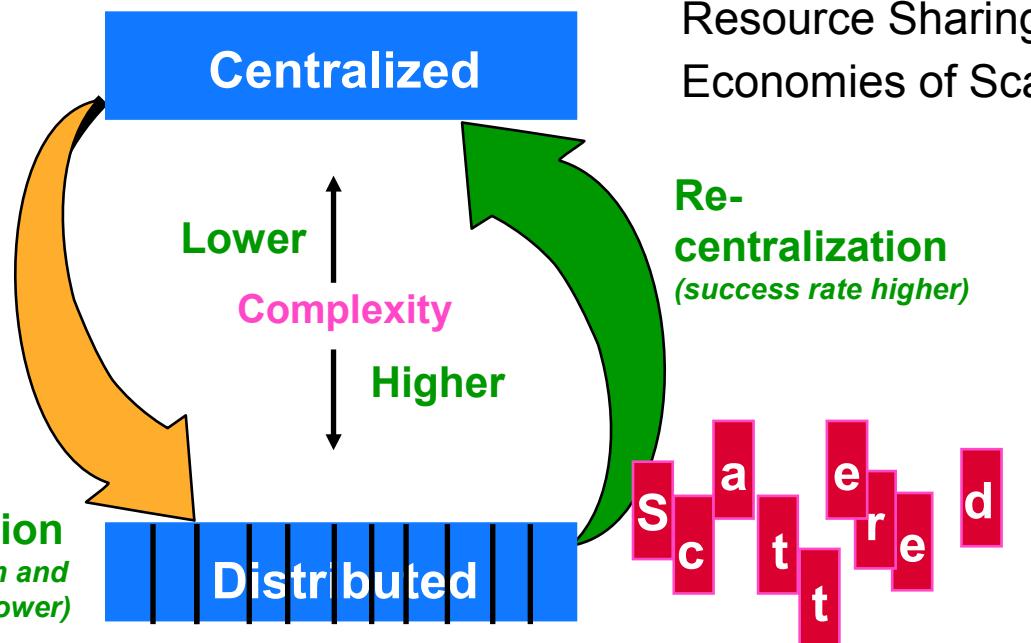
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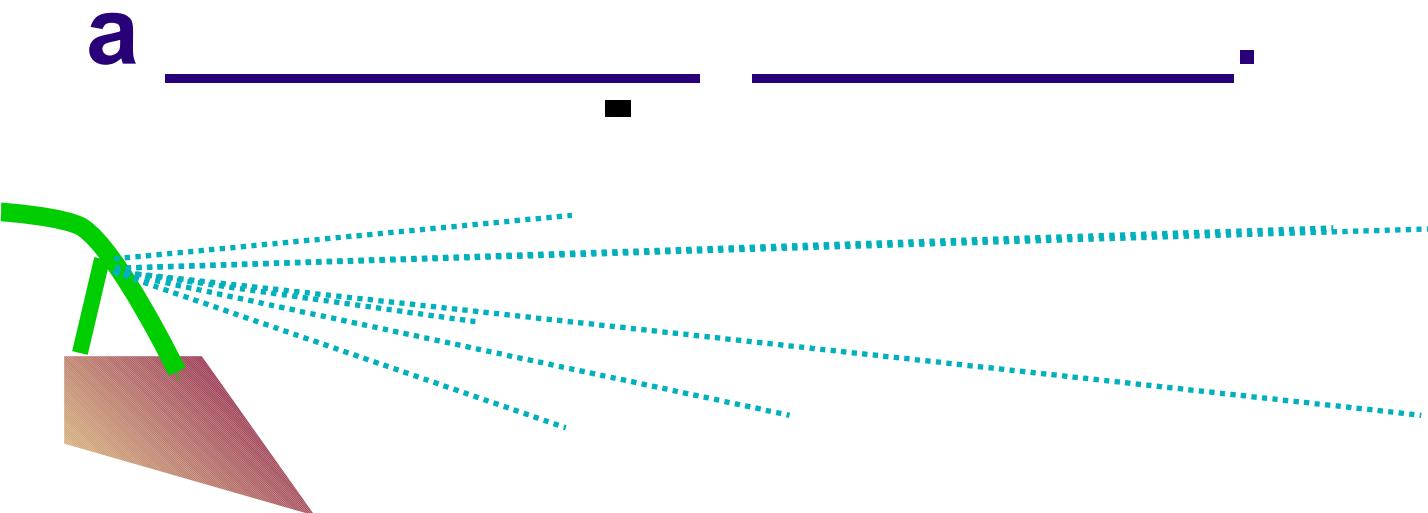
**De-centralization**  
(pay a premium and success rate lower)



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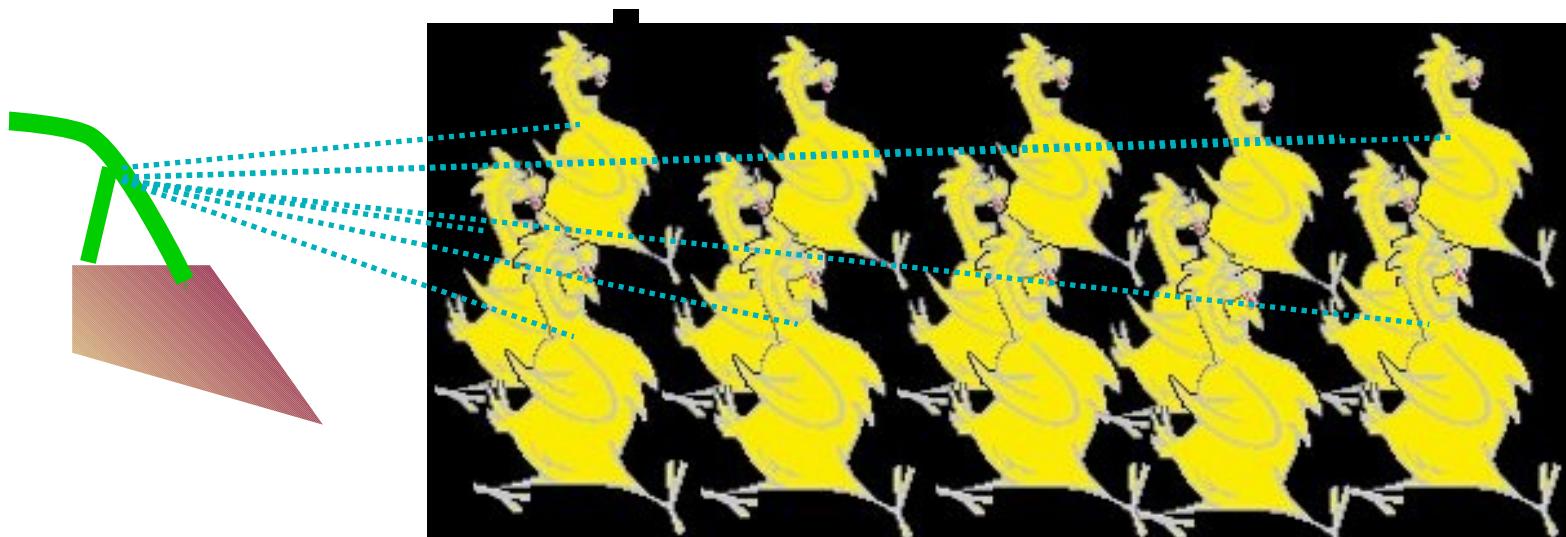
# Customer Savvy

**It is easier to pull a plow with  
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# Customer Savvy

It is easier to pull a plow with oxen than with  
a thousand chickens.



\*Fred McCallum, Government of Canada

# **How do you define value?**

**"Value" is a pretty nebulous term.**

**Value derived from peace-of-mind that it will be running and available 99.999% of the time ???**

**Value in knowing it wont be successfully assaulted by a virus ???**

**Value in trusting its security model to the point of allowing most any user to do just about anything they want to without jeopardizing the stability and function of the system ???**

**Value in building new capability integrated with legacy functions on one platform ???**

**Value of projecting an image of stability and trustworthiness to our customers because our systems are available to support their needs**

# Value Proposition

***IT value is related to:***

- Access to Data
- Security
- Performance/response time
- Scalability
- Resource and System Mgt
- Leveraging virtualization and centralization
- Availability, Recoverability
- Connectivity
- Affordability

*On a scale from 1 (low) to 10 (high), how would you rate the mainframe's functionality in each of these areas?*

# Image Rehab



"Image is everything!"

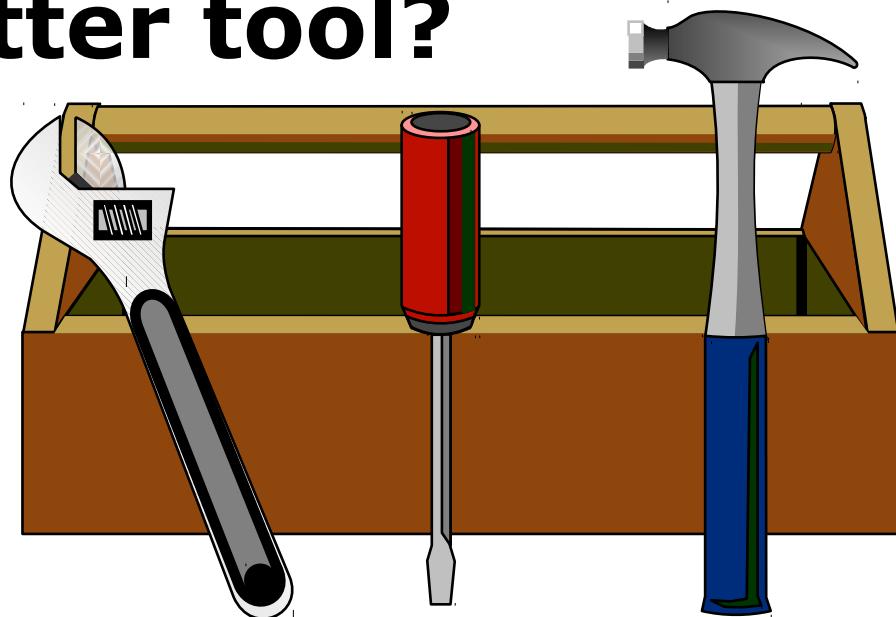


*Audience poll:*

*Is the mainframe's image improving at your place of work? (show of hands please...Yes? No?)*

# Avoid Foolish Arguments

**Which is the better tool?**

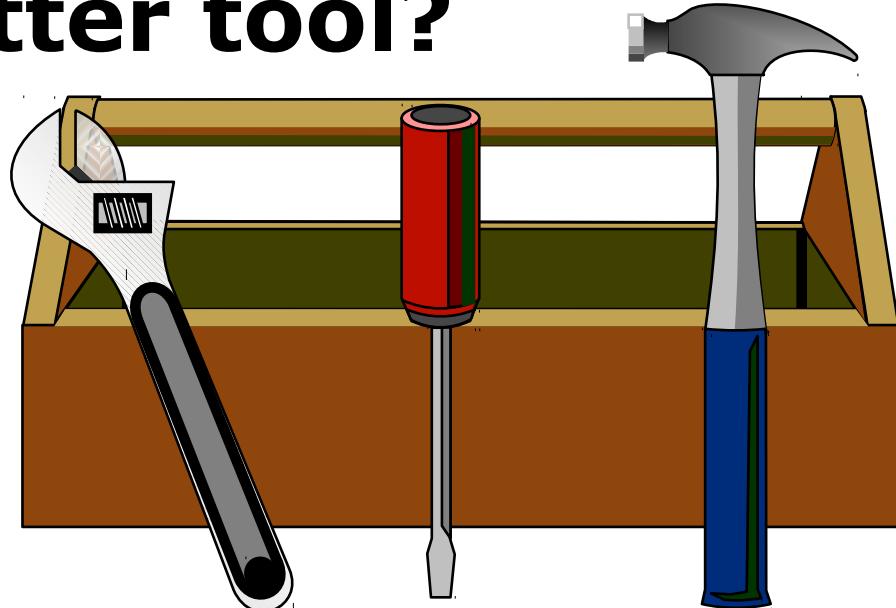


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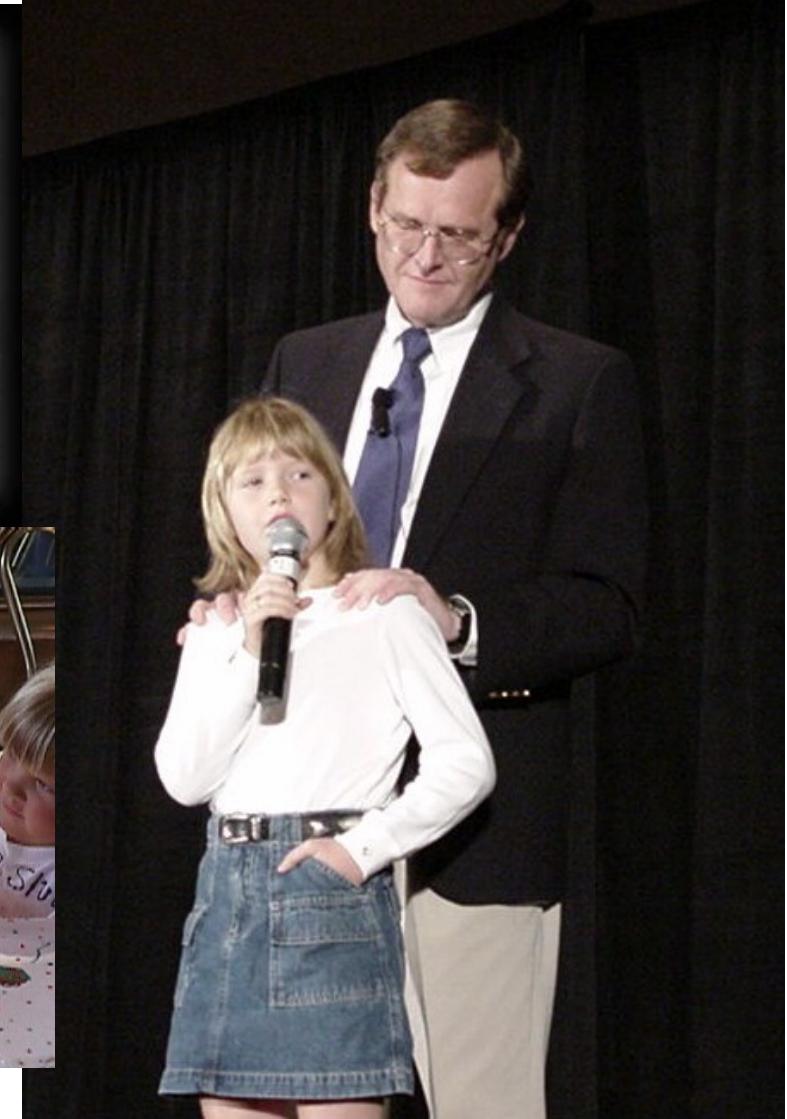


# Thank you!



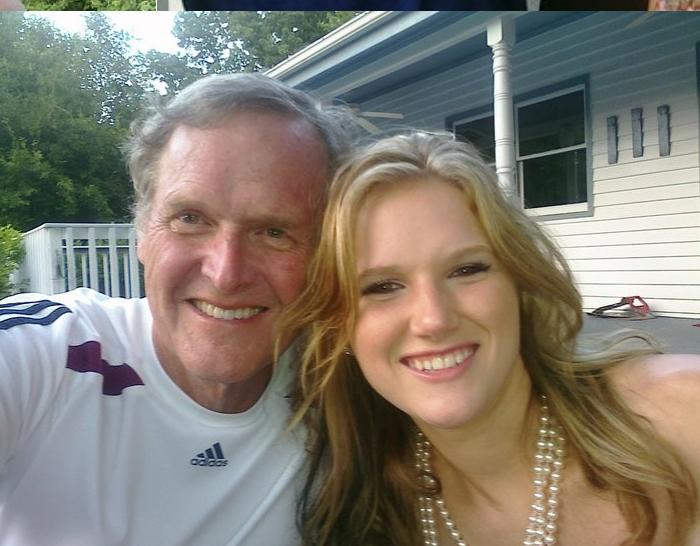
Bill Carico  
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434-426-2287

Then....



Allie speaking about Moore's law and fabrication technology at IBM Conf. in Orlando (age 8)

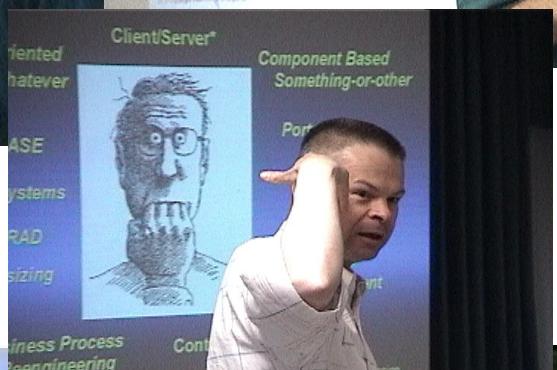
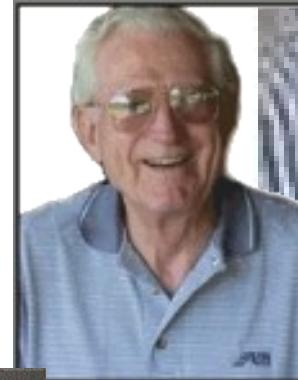
And now  
She just turned 20.



# Recognize anyone?

Day 2

S/390 and zSeries  
Issues and Answers





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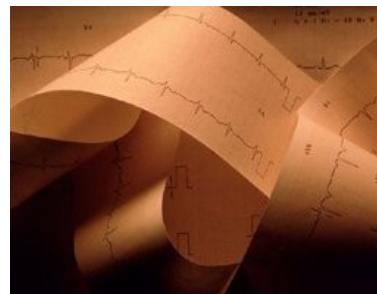
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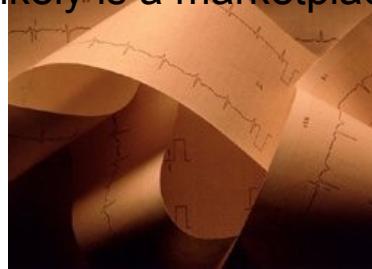
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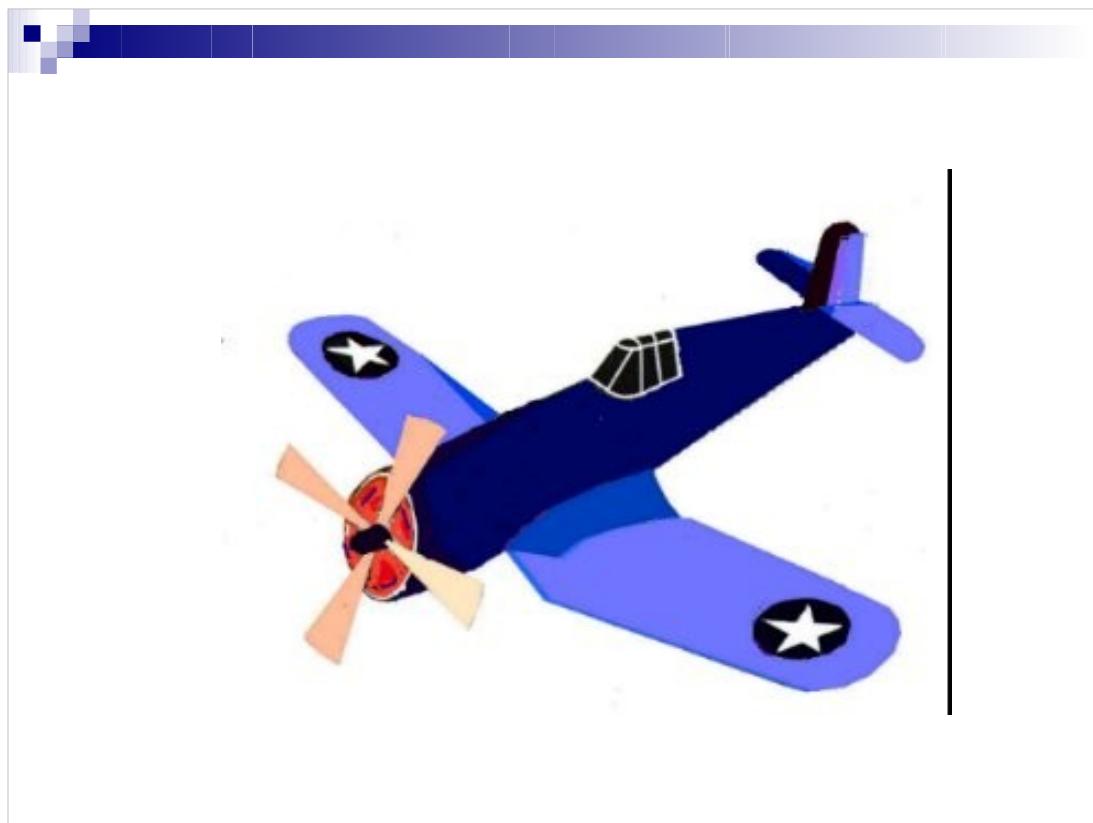
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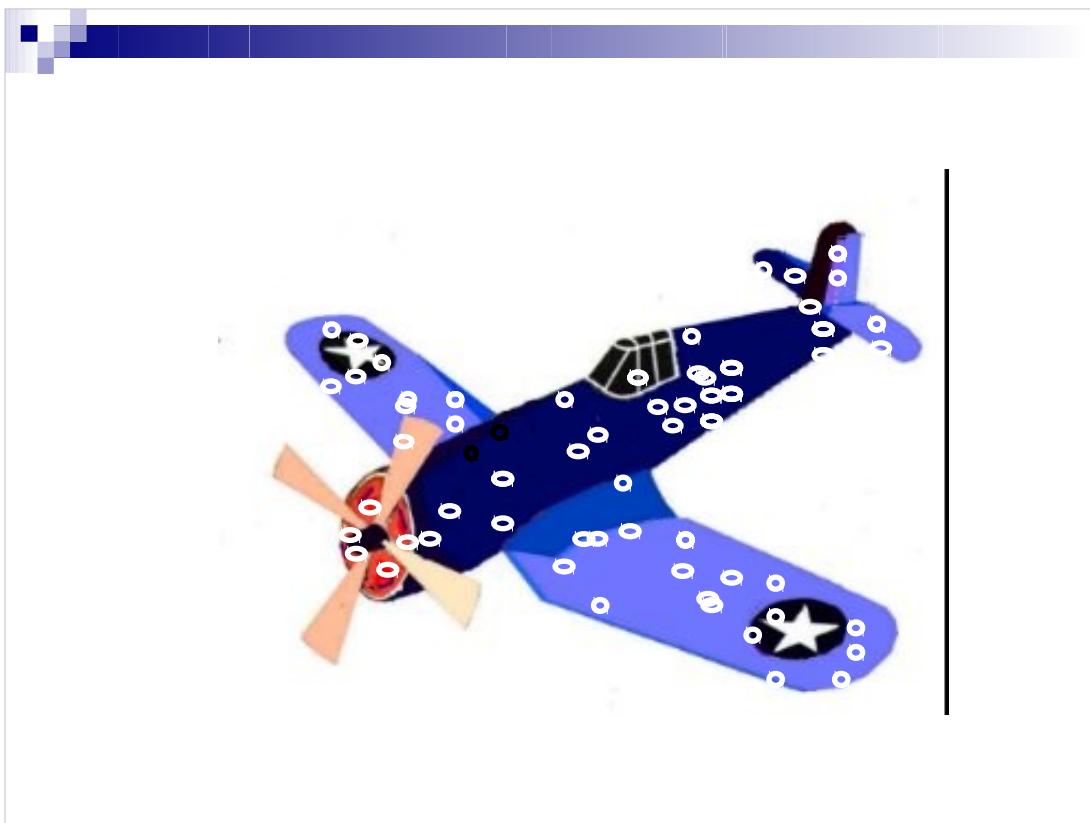


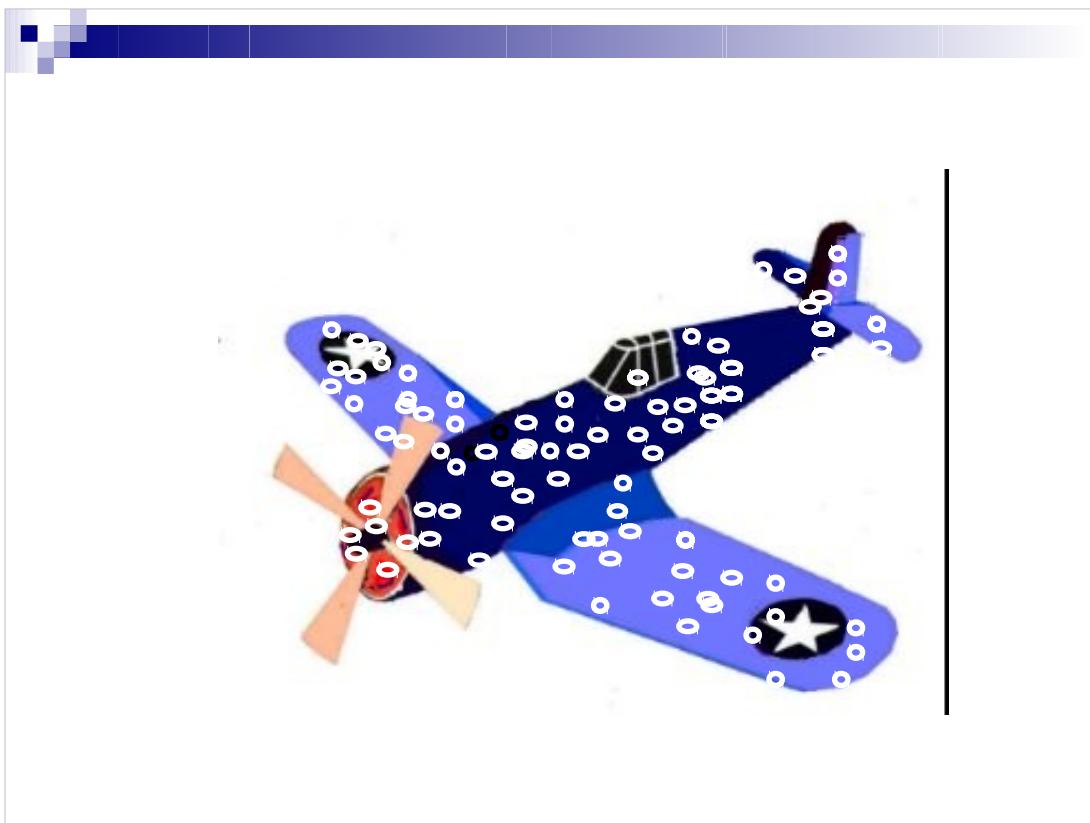
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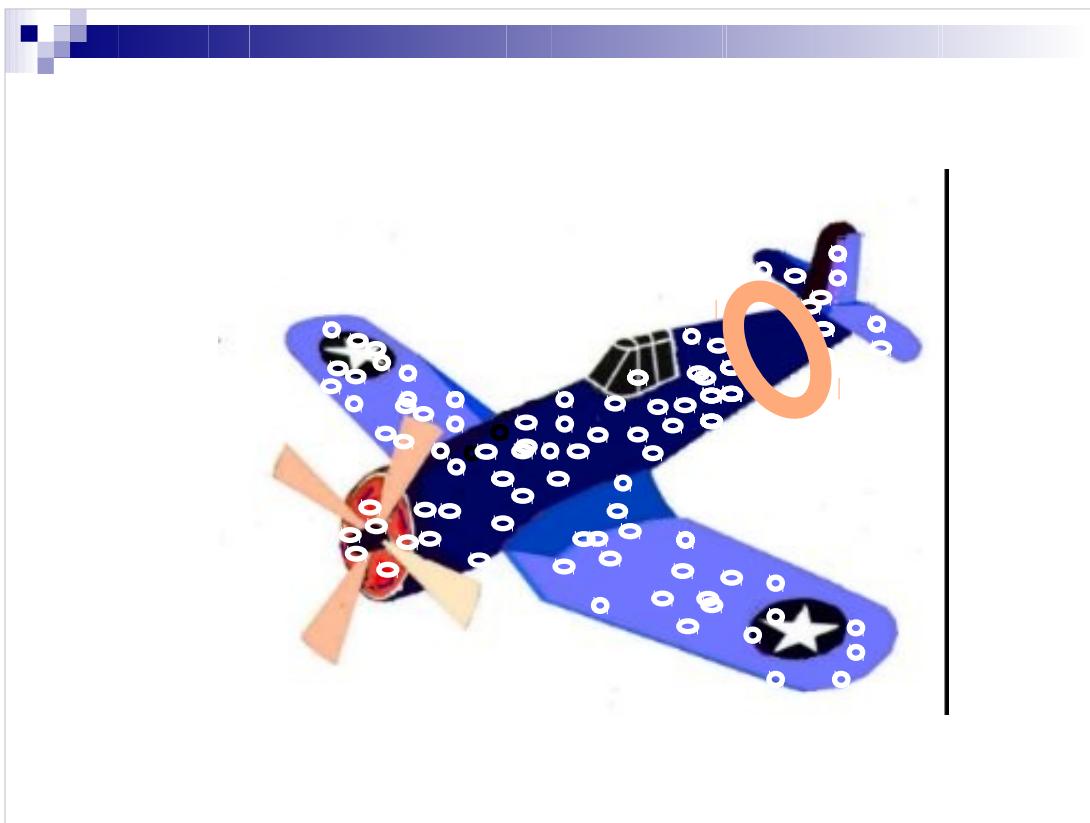


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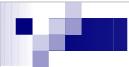
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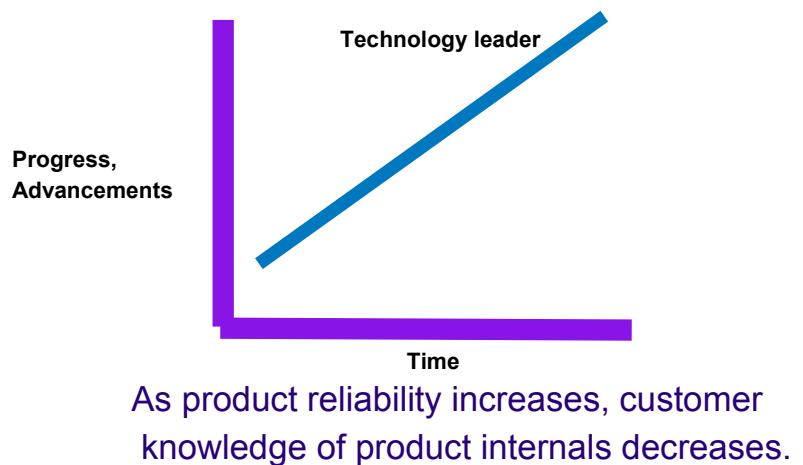


## Mainframes and Edu

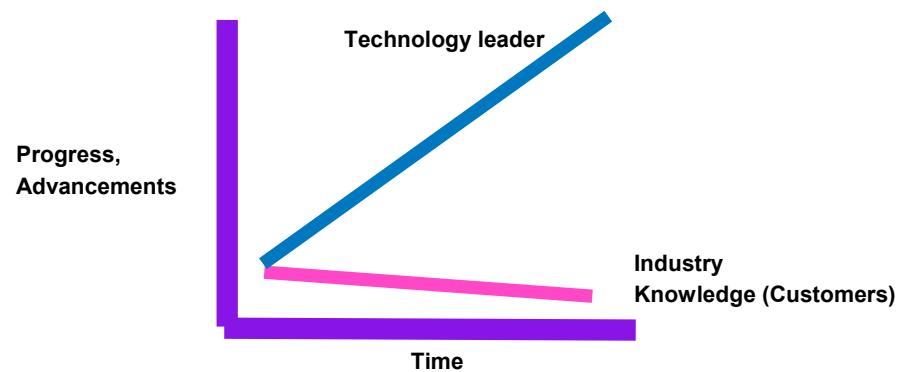
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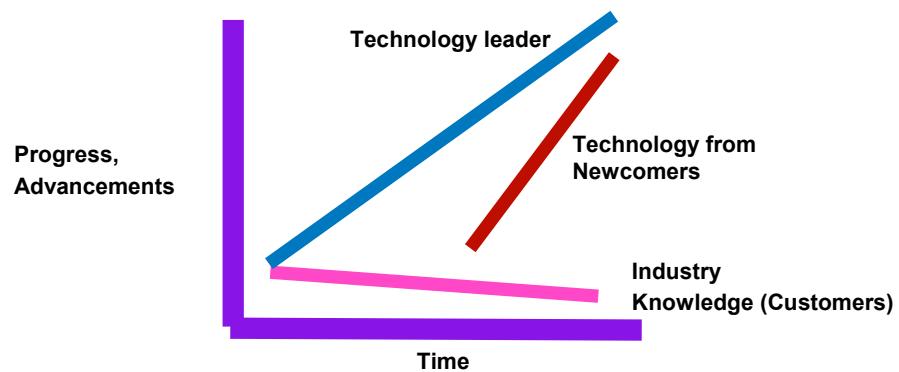


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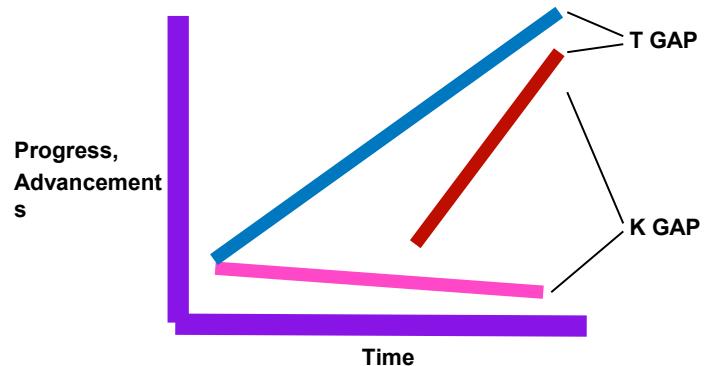
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## Technology GAP

**Scalability is  
a major issue**

## Credibility GAP

**Vendors, Consultants,  
Analysts, Journalists**

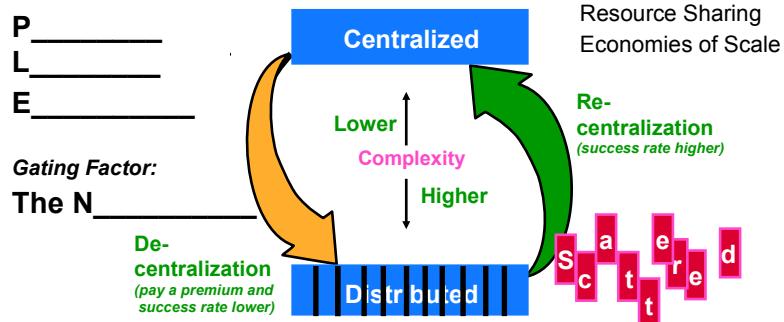


# Reboot Hill



# Why Consolidation works

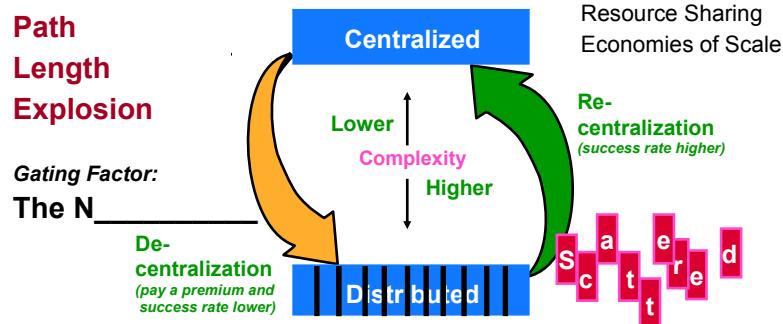
Centralized | Decentralized |  
Scattered



Applies to organizations and  
business processes, as  
well as computing platforms.

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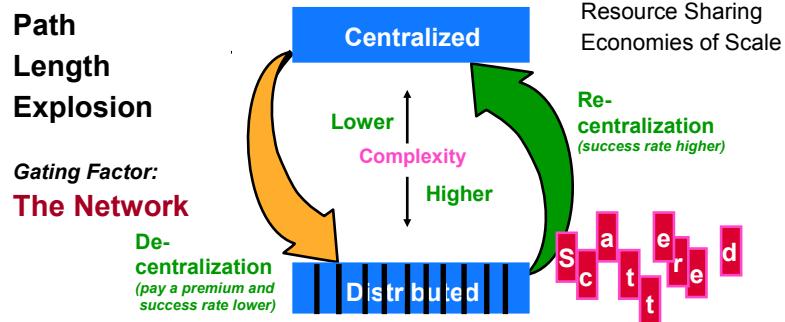
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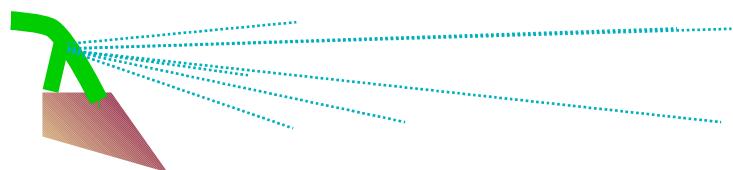


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## **Customer Savvy**

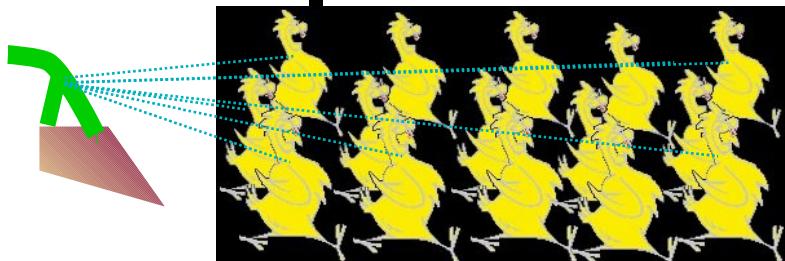
**It is easier to pull a plow with  
oxen than with**

**a \_\_\_\_\_.**



## **Customer Savvy**

**It is easier to pull a plow with  
oxen than with  
a thousand chickens.**



**\*Fred McCallum, Government of Canada**



## **How do you define value?**

"Value" is a pretty nebulous term.

**Value derived from peace-of-mind that it will be running and available 99.999% of the time ???**

**Value in knowing it wont be successfully assaulted by a virus ???**

**Value in trusting its security model to the point of allowing most any user to do just about anything they want to without jeopardizing the stability and function of the system ???**

**Value in building new capability integrated with legacy functions on one platform ???**

**Value of projecting an image of stability and trustworthiness to our customers because our systems are available to support their needs**

# Value Proposition

***IT value is related to:***

- Access to Data
- Security
- Performance/response time
- Scalability
- Resource and System Mgt
- Leveraging virtualization and centralization
- Availability, Recoverability
- Connectivity
- Affordability

*On a scale from 1 (low) to 10 (high), how would you rate the mainframe's functionality in each of these areas?*

# Image Rehab



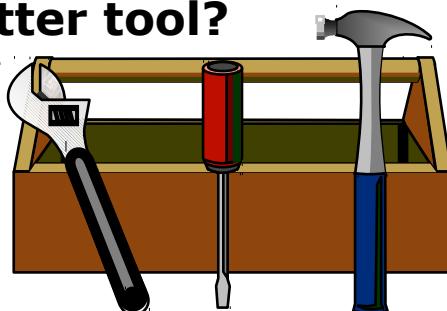
"Image is everything!"

*Audience poll:*

*Is the mainframe's image improving at your place of work? (show of hands please...Yes? No?)*

# Avoid Foolish Arguments

**Which is the better tool?**

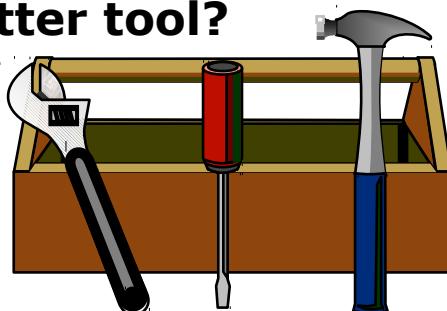


**Warning:**

*Prescription without proper diagnosis is...*

# Avoid Foolish Arguments

**Which is the better tool?**



**Warning:**

*Prescription without proper diagnosis is  
**malpractice.***



Thank you!



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Then....



Allie speaking about Moore's law and fabrication technology at IBM Conf. in Orlando (age 8)

And now  
She just turned 20.



## Recognize anyone?

