How To Talk IT TCO

Version 2017-03-14 3:00PM

Jointly Developed With:

WhiteBoard Selling®

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1 Understanding the How to Talk IT TCO Whiteboard

Use this **How to Talk IT TCO** whiteboard if your customer is struggling with understanding the costs of running their IT shop or you hear them say that they really want to understand how the COST of the mainframe compares to the COST of distributed alternatives. There is an e-Learning course which covers this topic at: https://w3- 01.sso.ibm.com/learning/lms/Saba/Web/Main/goto/learningActivity?courseNum=VSZTCO01.

Before you Present, Check Media Library (http://w3.tap.ibm.com/medialibrary/media_set_view?id=13664) for supporting Material. The How to Talk IT TCO whiteboard is comprised of six BIG Discussion Topics and eleven Steps.

Discussion Topic 1 - Setting out the objectives for the discussion
Discussion Topic 2 - Why would this customer (or any) customer be looking at conducting a TCO study/analysis?
Discussion Topic 3 - What makes up the IBM view of TCO - What are the 4 Dimensions of TCO and how do they come together to form the Complete Picture for TCO?
Discussion Topic 4 - How can enterprises **Optimize IT to Reduce TCO?**
Discussion Topic 5 - How did a TCO Study help a **customer** to better understand their real costs?
Discussion Topic 6 - Next Steps

Audience: The customer target audience for this discussion is the IT managers with overall responsibility for z Systems. The CISO can be included in this meeting or can be a "Next Step" in the form of a briefing. The goal of the whiteboard is to get agreement for one of the "next steps described in the Appendix.

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1 **Understanding the How to Talk IT TCO Whiteboard**

Legend for Colors
Color in this whiteboard is used to indicate the following:
Black - FACTS or subjects that frame the discussion.
Blue - Topics that we want to emphasize - typically Action-oriented, i.e., someone is going to do something (outlining what we will discuss for example) or has done something (customer story – **which you can add to this whiteboard**).
Red - Challenges or items that most people do not take into account in developing TCO.
Green - Action or activity that either overcomes an issue or provides a positive outcome.
The Items you should draw are shown in **[BOLD] in the color you should use.**

 NOTES TO PRESENTER:
• Do your homework before the meeting. Understand as much as possible about the audience – What is their current IT environment? What is their current corporate political environment? Are they currently growing their mainframe environment? If not, why not?
• You should be prepared with customer examples that will be relevant to the audience in terms of industry, region, size of organization, and so on.
• Many of these opportunities may involve or may need to involve other IBM teams. Make sure that you are working with your counterparts on other teams to help you to maximize the opportunity.

You will notice a list of questions with most steps of this whiteboard. These are designed to help you develop conversation between you and the client.

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1 **Understanding the How to Talk IT TCO Whiteboard**

2 **Step 1: Setting the Meeting Objectives**

Sales Script
Thanks very much for your time today

[Step 1] [Write: "Objectives, Underline it"]
When we set up this meeting you indicated that you had some questions about Total Cost of Ownership (TCO) **[Write: "- Why TCO"]** as well as what an organization can do to optimize TCO What I would like to do is first is get an understanding of why TCO is important to you right now. Then I would like to discuss how IBM looks at TCO based on 1000's of interactions we have had with customers.
[Write: - "4 Dimensions of TCP"] I would like to share with you some of the general ways that customers have optimized their IT operations to reduce TCO **[Write: "Optimizing TCO"]**. And, finally before we end, I would like to get agreement on an appropriate set of next steps.

Does this seem reasonable? **[Write: "Next Steps"]**

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2 **Step 1: Setting the Meeting Objectives**

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3   **Step 2: Why TCO?**

As with most things, there is usually a reason for an organization to undertake a TCO study or get interested in looking at TCO. Are there any things going on within your organization that are bringing rise to the need to do a TCO study? Let me quickly share with you some of the reasons that we have seen for customers to focus on TCO.

1 **[Draw Dollar Bill, Write: "Contain Costs"]** Organizations are looking to contain their capital expenditures and operating costs. Undertaking a TCO analyses (studies) can help to identify areas that may be candidates for specific action.

2 **[Draw 6 leg figure, Write: "Consolidation & Migration"]** – Corporate events like mergers or acquisitions, or new business operations often lead to the need to undertake consolidation of IT operations or to migrating applications to new environments (or both). Consolidating applications to less servers, virtualizing or consolidating servers to fewer servers or migrate applications from one machine to many -understanding the TCO for the various options can be important to making a final decision.

3 **[Draw Figure of a Computer, Write: "New Systems"]** Customers often need to purchase new systems to support growing or changing workloads. In conjunction with other analysis, like a Right Fit for Purpose, a TCO study can help you to better understand what the right & most cost effective system is for a new application(s)).

4 **[Draw Shark Fin Write: "Competition"]** - We are hearing from IT management that they are facing increased internal "competition" from distributed hardware and software vendors and Cloud Service Providers. These vendors are telling IT executives and LOB management that they can deliver either systems or IT services (Infrastructure As A Service or Software As A Service) much less expensively than their internal IT organizations are "charging them for services". Distributed hardware and software vendors continue to focus their discussion with LOB and IT Management on TCA - and having them look only at initial acquisition cost - creating real confusion with respect to what solutions really cost. A great time for a TCO study

QUESTIONS TO ASK
1. Are there other issues which you are facing as you think about your cost of IT operations?
2. Have any of your LOB "customers" been approached by outside Cloud Service providers? Are any of your LOB organizations using outside Cloud services?

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3   **Step 2: Why TCO?**

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4 **Step 3: The Four Dimensions of TCO**

1 **[Step 1] [Write the following in the upper left hand corner: "4 Dimensions of TCO"]** In looking at the TCO of IT, based on the 1000's of studies that we have done over the years, our teams have identified 4 Dimensions of TCO that should to be taken into account.

These include: **[Write: "- Cost Categories"]** - this basic building block for TCO - line items

[Write: "- Environment"] - Environments related to different aspects of an application's life cycle.

[Write: "- Time"] - things that happen to or within an organization over time.

[Write: "QOS – Business Value Req] What we find as we look across applications, especially business critical or mission critical applications is that in addition to the functional requirement (what an application does) there are almost always a set of Quality of Service (QOS) or Business Value Requirements (BVR) which describe how the application needs to operate - what level of performance, security, availability, etc. These requirements can have a significant bearing on cost.

QUESTIONS TO ASK
1. How do you look at TCO? Are there other dimensions that your organization takes into account?

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4 **Step 3: The Four Dimensions of TCO**

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5 **Step 4: Cost Categories**

QUESTIONS TO ASK
1. What other categories do you use when looking at TCO?
2. How do you take into account facilities costs?
3. Are there any other allocations that you use?

❶ **[List the Categories below with Names or ICONS or both]** Cost Categories are the most straight-forward aspect of determining TCO. These can include:

[Write: "Hardware"] Hardware, these are the servers, devices, etc.

[Write: "Software"] This includes middleware (DBMS, OS, etc), management, applications, maintenance and upgrade, etc

[Write: "People"] includes development & operations

[Write: Network] This category is for both hardware (routers, switches, cabling, UPS systems, etc.) and software (and network charges)

[Write: Storage] Again this is both hardware and software.

Lastly, **[Write: Facilities]** Be sure to include space, energy related costs (cooling, etc).

Note: And all categories should include not just for production, but also cost of emergency backup, development and quality control and testing

5 **Step 4: Cost Categories**

6 **Step 5: Environments**

❶ **[Write Across the Whiteboard add the Items below in Black]** For most applications and in particular for a major (Mission or Business Critical) application there will be a number of different operational environments that will include some if not all of the following:
[Production   Online - Batch – Failover] (if the application must have a high degree of availability - both the online and batch environments may also require a failover environment)
Development **[DEV]** - (Some organizations might combine Dev & Test into one environment)
[QA]
[Test] - Test could require separate environments for component test and systems test.
[D/R] - Disaster Recovery

QUESTIONS TO ASK
1. As you look at the key applications, what types of environments do you typically have?
2. Do you have an idea of how many servers are supporting your key applications? All Applications?

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6 **Step 5: Environments**

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7 **Step 6: Categories and Environments - Building TCO**

1 [**Draw "$"** in a box Down Under Production for Each Category as you discuss them below. This is where the real discussion of TCO begins to take shape.]
Hardware – more than likely, if you're looking at distributed implementation, for the production environment alone you may require or have separate servers for the database, the application, or web services, etc. In addition, you will more than likely have separate servers for failover, development, test, QA and Disaster Recovery (D/R)
Software – you'll then need software licenses for ALL those servers and maintenance and support fees
People - They ALL require staff for operations, support, etc.
Network – there will be network considerations – depending how you have set up the production environment and whether it is running in one location or across multiple locations
Storage – More than likely storage devices are needed across more than one of these environments if not ALL.
Facilities - There will be facilities costs – again many organizations don't take into account facilities costs when they look at distributed servers – but they do take up space, they do use energy.
The reality is that the cost structure we just described needs to be repeated in some form for each of the environments that an application (or applications) requires. There may be only a few environments – but there will be costs…

2 To keep the picture somewhat simple, using a red pen let's just draw arrows across to represent that we need to repeat this rather than spend the rest of our time together drawing lots of servers, lots of people, software and storage devices. **[Draw 2 arrows across the environments]**

QUESTIONS TO ASK
1. When your organization or finance has looked at IT have they looked at the cost categories across all of the environments?

OBJECTIONS
We have already addressed some of this by virtualizing.
RESPONSE: Virtualizing can help to reduce some of these costs, but often we find that the reality is there are more servers in the environment and more costs than people anticipated.

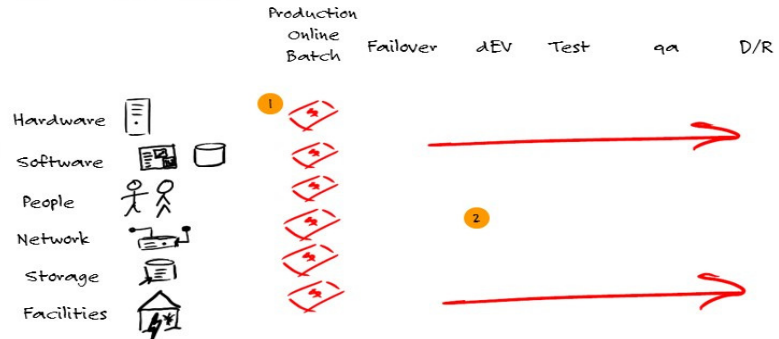For IBM and Business Partner Use Only

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7 **Step 6: Categories and Environments - Building TCO**

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Step 7: The Third Dimension - Time

Now that we have a picture of how Cost Categories and Environment impact TCO there is another dimension, which many organization do NOT take into account when looking at TCO – Time and the "things" that happen over time to affect the environment and the cost categories.

[NOTE to presenter - when you are discussing these items - you should link them back to the cost categories to ensure that the audience understands that there is a link - might "star" the item or put an "x" next to the one's discussed.] **USE Red Pen**.

1 [**Growth - draw DB, person, TX (transactions)**] – Growth both planned and unplanned can have an effect on almost all of the line items for each environment, but the biggest impact is usually on production. Growth considerations can include: data (data collection and storage -to meet internal and external requirements & the increased importance of image and documents), users (or customers), storage, and transactions (TX). These growth variables can have a significant impact on TCO especially if it means new hardware. And with that new hardware – related software, people, energy and facilities costs.

2 [**Refresh - draw server, application, DB**]. Over time, there will always be new versions or updates of software and hardware which the organization may want to take advantage of. These "refreshes" can often occur every year or so and can often be significant depending on the "environments" and which of the associated "cost categories" are being impacted.

3 [**Draw a cloud, lightning bolt and tornado cloud and write Events**] - Another time consideration that can have an impact on TCO and often bring rise for the need to do a TCO analysis is "events". These can be corporate related such as a Merger or Acquisition; a natural or other "disaster", or perhaps an IT related activity such as a Migration or Consolidation. What is key is that the organization have an approach which takes into account – all of the related cost categories – the costs of software, networking, additional capabilities (hardware and/or software) related to security, people costs, and the costs of running dual systems until a migration is complete.

QUESTIONS TO ASK
1. How do you factor these types of considerations into TCO?
2. When you do a TCO analysis, what timeframe do you consider? 3 - 5 years?
3. How long do you typically project the useful life of a new application to be?

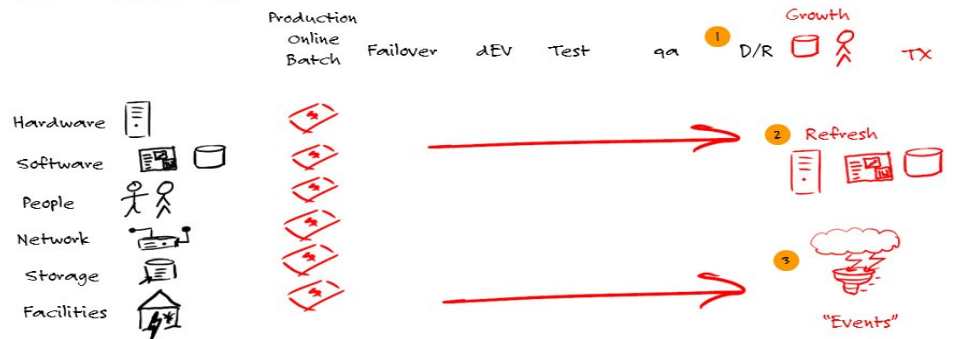For IBM and Business Partner Use Only

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Step 7: The Third Dimension - Time

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9 **Step 8: The Fourth Dimension - Quality of Service**

The last dimension relates to key Quality of Service or Business Value.

1 **[Write: several "Availability... Resiliency... Security... Scalability... Manageability"].**

These requirements can often be a critical consideration for an application and the associated infrastructure especially for the Line of Business. Failure to meet these requirements can often have a significant and material impact on the business in terms of lost revenue (denial of service, can't process credit cards, can't issue tickets, can't process receivables, etc.), financial impact (a security or other breach which can often cost $millions), impact on reputation (security breach), loss of customers (can't process orders, can't answer customer calls or inquiries) or can't meet seasonal demands which put increased burden on the infrastructure.

Most if not all of the following will have some associated built-in or incremental cost which often is NOT taken into account with TCO especially when looking at TCO for distributed systems. Here some of the key QOS requirements that could be mentioned: **Availability, Resiliency, Security, Manageability, Scalability, Usability, Maintainability, and Extensibility**

QUESTIONS TO ASK
1. How do you look at these when you are looking at TCO? Are they considered with all or some applications? Any idea what % of applications?
2. How much are you doing to put in place the safeguards to protect your key applications from issues related to availability, security, etc.?
3. Have you had any significant outages, breaches, etc.? How did they impact the organization? Lost revenue? Customer issues? Regulatory issues? What has been done since then?

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9 **Step 8: The Fourth Dimension - Quality of Service**

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10 **Step 9: TCO - A More Complete Picture**

1 [Draw Green Box around the Dimensions]
2 [Write "For TCO - You Need the Complete Picture" - Draw Green Circle around comment] What we have just pulled together is a Complete Picture of TCO (or at least a MORE complete picture of TCO. This complete picture of TCO takes into account much more than Total Cost of Acquisition or the initial cost of deployment.

[Note: As you recap each of the 4 Dimensions of TCO - in Green - add in a label for that dimension with a box around - Cost Categories, Environment, Time, QOS-Bus Value]
The Complete picture looks at ALL of the associated Cost Categories]

The Complete picture includes a realistic view of what it takes to build, deploy and maintain a business critical system – and that means more than just one environment - a production server and the associated costs - it means taking into account ALL the Environments. **3** [Write "Environments" Enclose it in a box].

The Complete picture accounts for the changes that will occur over the Time frame of the TCO **4** [Write "TIME", Draw a box around it] TCO analysis. There is growth, there will be systems and software changes and there will be events (that might trigger the need for a comparative TCO)

The Complete picture takes into account the costs to meet not only the functional requirements, but also the Quality of Service (QOS) or Business Values as set forth by the Line of Business. **5** [Write "QOS-Bus Value", enclose it in a box]

[NOTE to presenter: you may have a customer raise the question about Chargeback - if they do - The reality is that many organizations do not take into account these 4 Dimensions or properly allocate ALL associated costs when they develop their Chargeback approach - the result is a Chargeback approach which is mis-aligned between resources or infrastructure used and services delivered.]

QUESTIONS TO ASK
1. In broad terms how does you organization construct the TCO for IT? For specific applications?
2. Do you have a chargeback mechanism in place? OR Is you IT organization charging for IT Services? What approach? Any issues?
(Before STEP 4)
3. Do you think that your current Chargeback approach is reflective of your "real" costs?
4. Are there other considerations that you factor into developing TCO?

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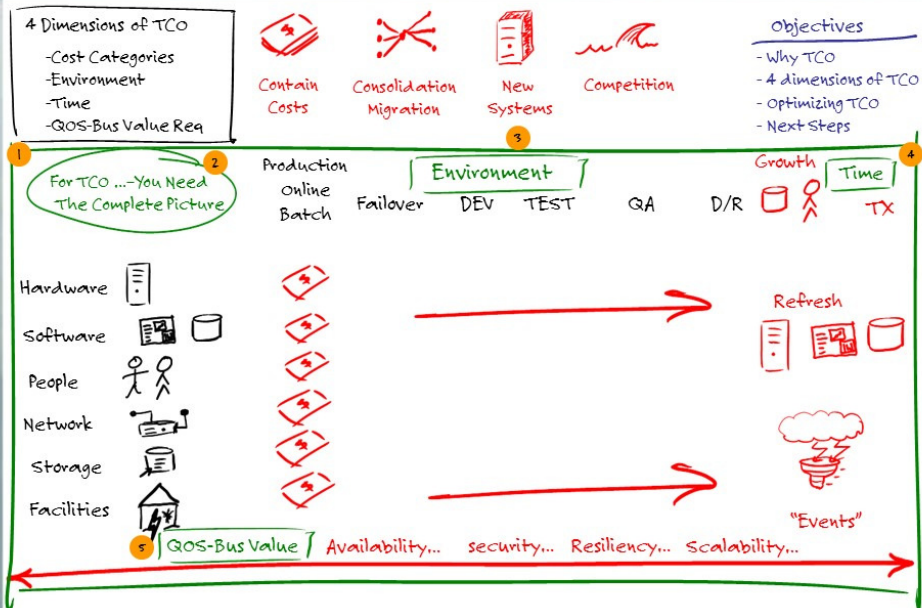
11 **Step 10: Optimizing IT to Reduce TCO**

1 **[Between the two arrows, Write: "Optimizing IT To Reduce TCO"]** I'd like to review some of the ways that our customers have optimized their IT environments to reduce TCO; what steps they have taken to help identify what they can do to optimize TCO; and what some of the results have been.

[NOTE to presenter - you should avoid getting into TOO much detail at this point - resist the urge to go into great detail about z Systems or other Systems**]**

2 One way to Optimize your IT environment is to have a computing infrastructure which enables you to reduce the expenses associated with the "cost categories" for the environments that need to be supported for a given application or set of applications. For example, you can look at systems that can help to reduce software license or facilities costs, or systems that reduce or eliminate maintenance and support activities. **[Draw Bracket from Cost to Optimizing IT]**

3 [Another option would be to virtualize or consolidate servers using z Systems or consider systems that can be (these can both be done with System z) is to virtualize or consolidate servers or consider systems that can enable you to reduce the discrete number of environments that you need to operate. For example, a system where you can operate "virtual environments" for three or four of the environments. **[Draw bracket under the Environment]**

The net effect of Optimizing IT can be to significantly reduce your TCO for specific apps or a group of apps to free-up $$ for innovative new initiatives that can help the organization reach new markets, better service customers, or become more competitive.

What have others done to better understand what they can to and what it can mean to them? Let me give an example**.**

4 **[Write: "Government Agency"]** A U.S. Government Agency needed to upgrade their z196 due to their expected growth factor. **[Write: "Forecasted Growth Required New Processor"]** They were considering moving to X86s, thinking it would be less expensive. **[Write: "z/OS on z13, $22M less expensive than x86 over 5 years"]** They found that over 5 years the mainframe's TCO solution to be $22M less expensive. This did not include the cost of disaster recovery for HW, SW, electricity, space, etc. This would have doubled the X86 cost.

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11 **Step 10: Optimizing IT to Reduce TCO**
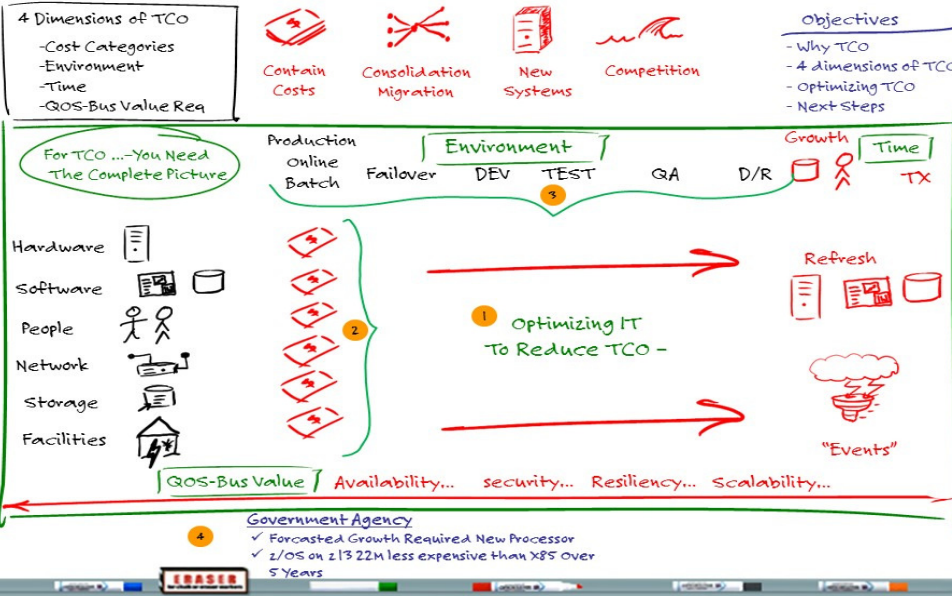
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12 | Step 11: Next Steps

① **[Write: "Next Steps]**
Based on what we have discussed today - I would like to suggest that we set up a meeting with a member of one of our TCO Study Teams to begin describing what the study would entail and what you could expect OR IF A Right Fit for Purpose Workshop is more appropriate - I would like to suggest that we set up a time to hold a Right Fit for Purpose Workshop to look at the applications you mentioned and what platform would be most appropriate - after that we can begin looking further at TCO.

Can book a time on your team's calendars to kick-off a study?

[**NOTE:** More information regarding the Studies is available in the Media Library and eLearning - you may also want to contact a member of the TCO group prior to the meeting.

QUESTIONS TO ASK
1. Can you help me to identify who else should be involved in the next set of discussions?
2. Will you be the sponsor for this next meeting?
3. Do you foresee any events coming up where you will need to compare costs and where one of the TCO studies would be helpful?

OBJECTIONS
This all great, but, I don't want to give you a breakdown of other vendor's costs - without the details how can you conduct a meaningful study.
RESPONSE: I can appreciate your concern but I understand from talking with members of the study teams that this is not an unusual situation. Many of the customers do not provide the line item details. However, based on our experience with 1000's of studies we have developed ways to take this into account.

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12 | Step 11: Next Steps
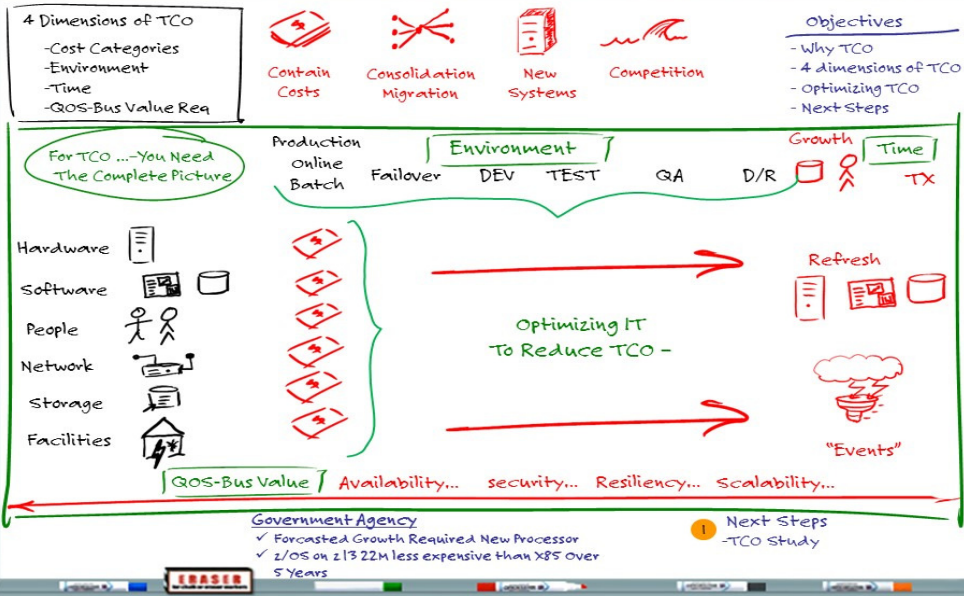
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12 Appendix – Additional References

Chief Operating Officer of Bank determines z Systems more cost efficient than x86

A European Bank planned to offload its Oracle Workload running on z/OS to x86 to reduce costs. What he determined was that offloading the workload to x86 would INCREASE TCO by 125%. The Key factors in increased cost are the distributed software charges and the disaster recovery solution. In addition, a move to x86 would require splitting DB across multiple servers causing incremental computer overhead. And the COO was concerned that moving the database to x86 would introduce bugs, requiring isolation and corrections which add to the TCO. One of the key benefits of leaving the database on z Systems are upgrades are done with no interruption on z Systems.

z Systems has Security and TCO advantages at Large Credit Card Center

Large US Credit Card Processing Center running various versions Oracle running on x86s and were considering a migration to IFL on either zEC12 or z13. Their best TCO was 44% on a z13. Plus there were benefits less maintenance and fewer points of access for Security Breaches.

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12 Appendix

Appendix: Additional References

COO of Bank determines z Systems more cost effient than x86
- Offloading would increase TCO 125%
- Increase TCO from repl Dist SW and Disaster Recovery Solution
- X86 required splitting DB across multi servers, with added overhead
- Migration to x86 would introduce bugs

z Systems has Security and TCO advantages at Large Credit Card Center
- Exadata TCO driven by lg number of cores
- Solution IFL on z13 reduced TCO by 44%
- Benefits: Less Maintenance, < pts of access for security breaches

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12 **Appendix – Additional References (cont)**

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Brazilian Bank Adopst z/OS on a z/13

One of Brazil's largest banks required maximum security and availability to protect its customer data against security breaches and potential downtime penalties from the Central Bank. They consolidated multiple databases into a single DB2 z/OS instance which enables higher performance. And this solution achieves maximum security with DB2 encryption and Multiple Level Security. And the solution lowers TCO by 2.8M over 5 years.
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12 **Appendix (Additional References (cont.)**

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Appendix: Additional References (cont)

Brazilian Bank Adopts z/OS on a z|3
- Maximum security and availability
- Avoids penalties from Central Bank
- Lowers TCO by $2.8M over 5 years