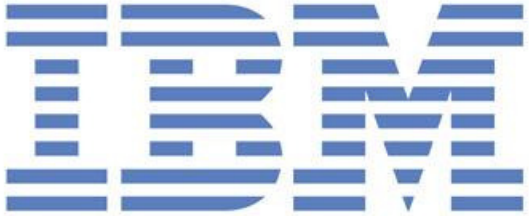
Value of IBM z13



Jointly Developed With:

1

The Value of IBM z13

The Value of IBM z Systems

The purpose of this whiteboard is to help facilitate a discussion with your customer on the value of z Systems. This Whiteboard has been updated to include the IBM z13, and help reaffirm IBM's commitment to z Systems with the announcement of the z13. It provides you with a tool to discuss how z13 further strengthens the value that the z Systems family of products brings to organizations.

This whiteboard can also be used to help further educate members of IBM account teams on the value of z13. This can be used for the z196, z114, EC12 and BC12 as well as the z13 systems.

When to use this whiteboard:

- Proposing new workloads for z Systems.

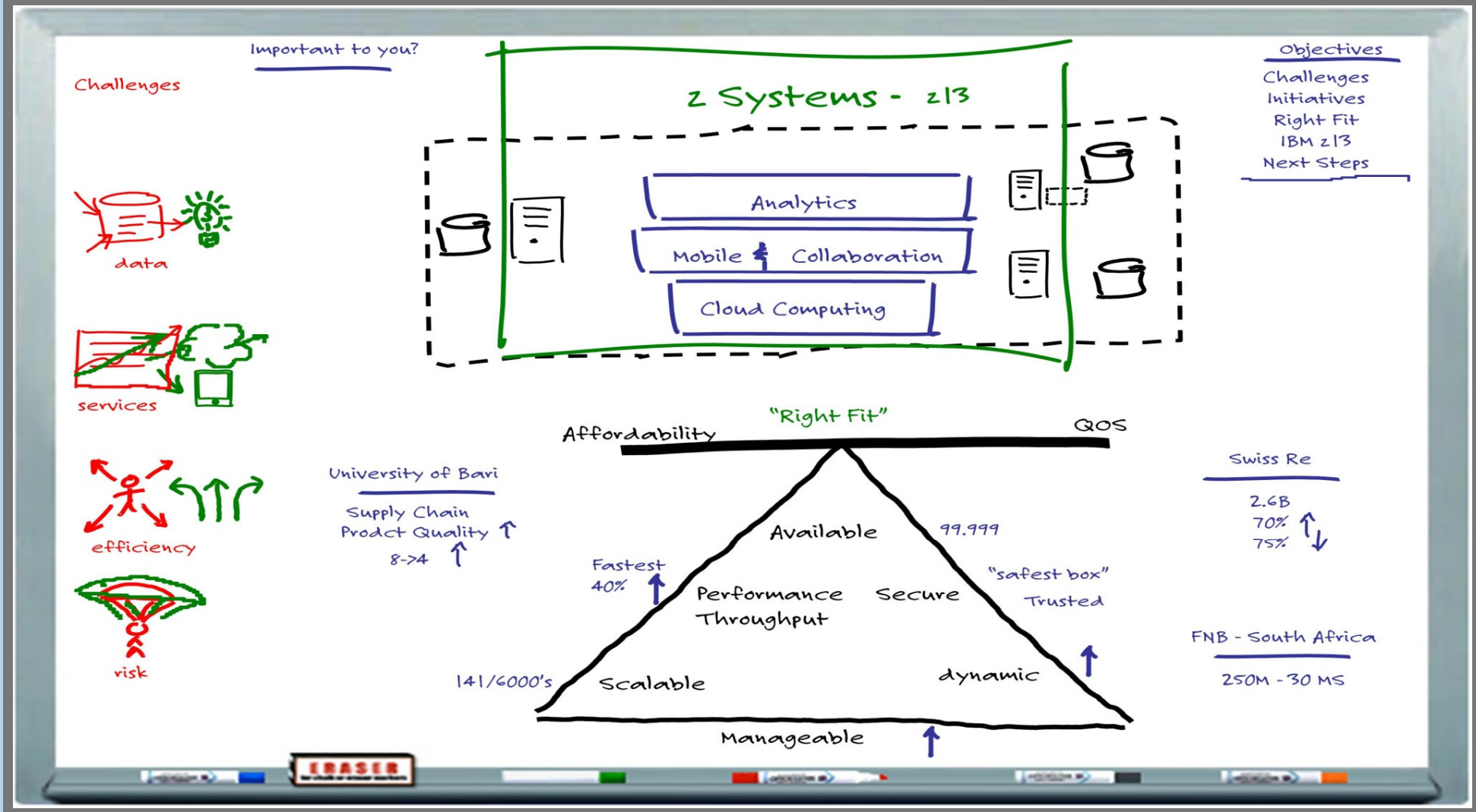
- There is reluctance on the customer part to deploying new workloads on z Systems.

- Customer is considering moving workloads off z Systems

- The IBM Account team is not convinced that they should sell the solution with z Systems family of systems.

NOTE to Presenter: You should always check the Whiteboard Media Library in preparing to learn and give this whiteboard. The Media Library series can be found at: http://w3.tap.ibm.com/medialibrary/media_set_view?id=10317

1 The Value of IBM z13



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The Value of System z13

The "The Value of IBM z Systems z13" Whiteboard is comprised of 10 Steps.

1 - Outline the objectives for the discussion

2 - IT (Heterogeneous) Environments - Use this step to validate the Client's environment by discussing the "mixed" environment that most organizations have today

3 - Challenges facing IT – This step can help to get the customer to begin discussing their challenges and what's important to them

4 - IT Priorities – To address IT and business challenges, most organizations are undertaking some "list" of priority IT projects – to facilitate discussion we have listed top priorities as described in various CIO studies. (IBM CIO Studies, Research from Gartner, and others)

5-6 – Key Considerations and Requirements - To help develop the "Value" message, the Whiteboard outlines "Right Fit" Considerations and Quality of Service Requirements that are important for customers in addressing their IT priorities

7 - The "Right Fit" Trade-off – Key to any decision is to Balance Affordability and the ability of the Platform to meet workload requirements

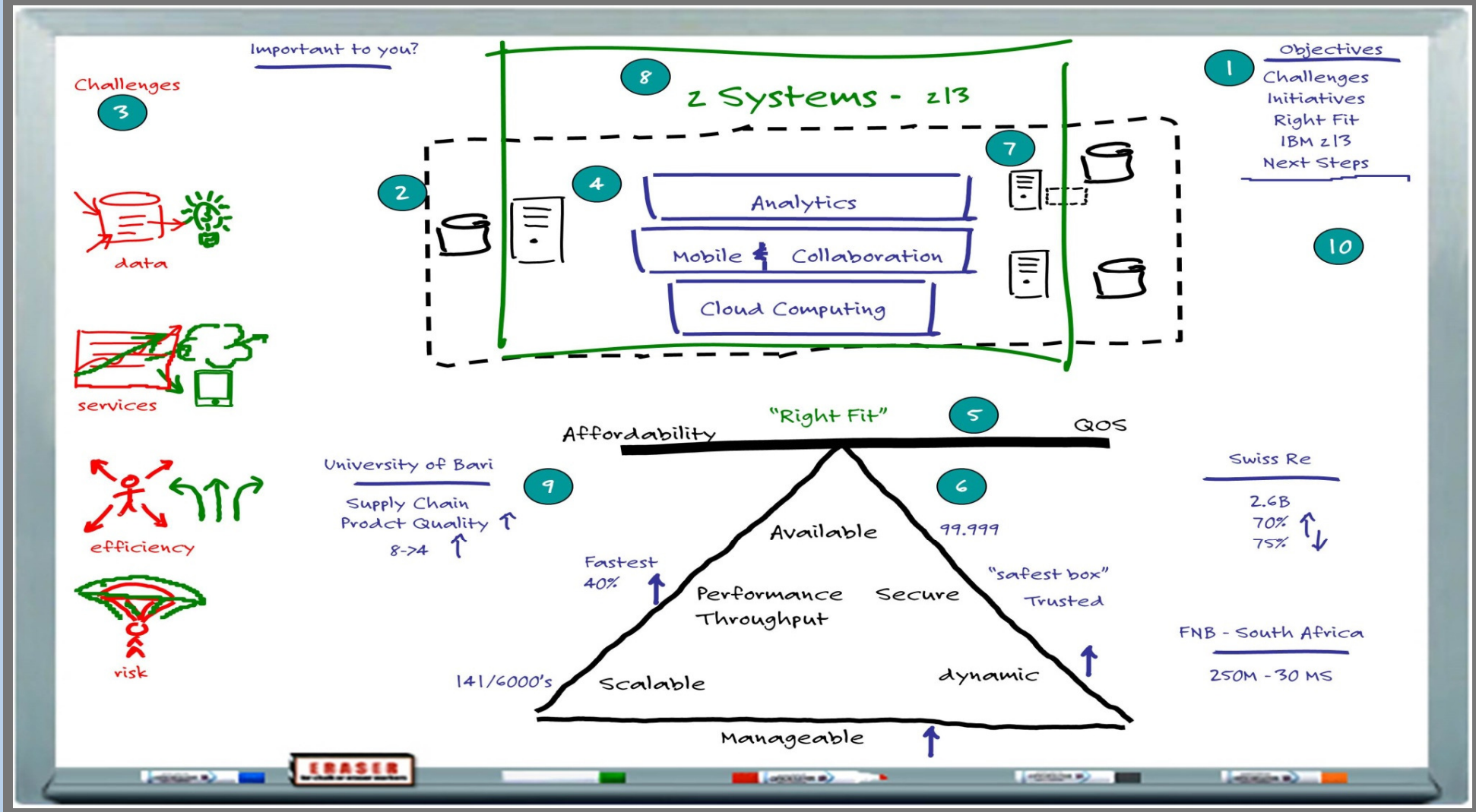
8 - zEnterprise – How zEnterprise provides Value by meeting Quality of Service - Right Fit considerations

9 – IBM z13 – How z13 further extends zEnterprise support for these requirements

10 - Customer Examples of zEnterprise enabling customers to address Key IT Priorities

11 - Recap and Next Steps - Each discussion may have different Next Steps – it is important to recap the discussion and address the specific Issues/Challenges and Priorities the client raised – but just as important it is important to get agreement on a specific Next Step.

2 The Value of System z13



Step 1 - Establishing the Objectives

Thanks for your time today.

1 **[Objectives]**

As we talked about the purpose of setting up this meeting, I would like to begin our discussion in the context of your Challenges, especially in light of the kinds of technology Initiatives that you are working on or planning to do. There are often a number of alternatives available when it comes to deploying these new or improved applications. For this reason, I will share a Right Fit methodology that has helped a number of our customers.

You have also asked about the latest news on the IBM z13. So, I would like to bring z Systems and the modern z13 into the discussion around Right Fit – when would z13 be the right fit to address your Challenges and Initiatives? I'd like to also give you a better appreciation on how z13 can provide significant value to your organization.

Then, we can talk about some possible Next Steps based on our dialogue today.

Does this pretty much capture the reason we are here today?

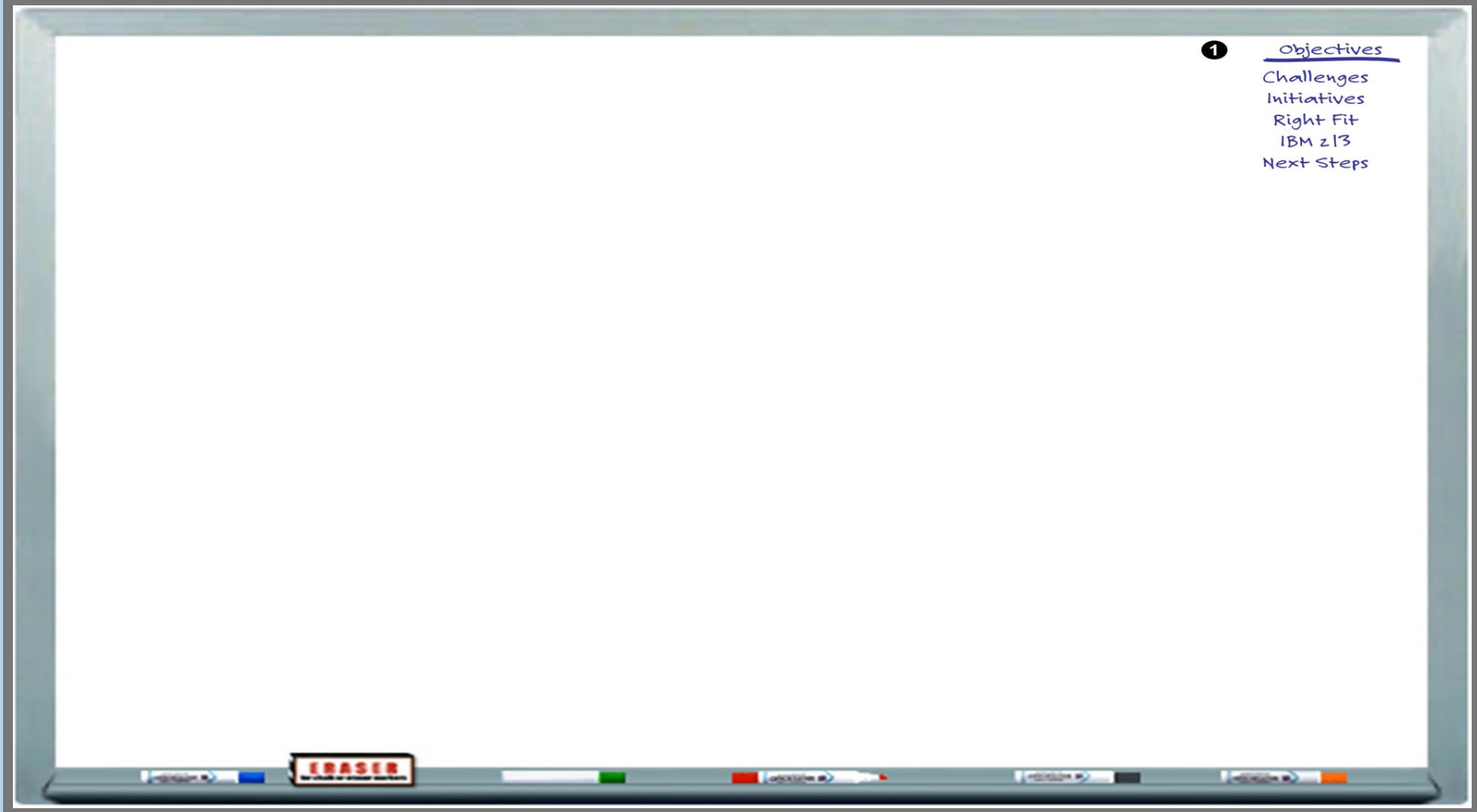
Great, let's get started.

Note to Presenter: As you mention each objective, write them down under the heading as follows:

Objectives:

Challenges - Initiatives - Right Fit- IBM z13 - Next Steps

Step 1 - Establishing the Objectives



Step 2 - The IT Infrastructure

I'd like to start by making sure that I have the right picture of your current IT infrastructure.

1 **[In BLACK Draw a dotted line rectangle - inside the box draw one larger server on left and one data store - 2-3 smaller servers on right and a data store]**

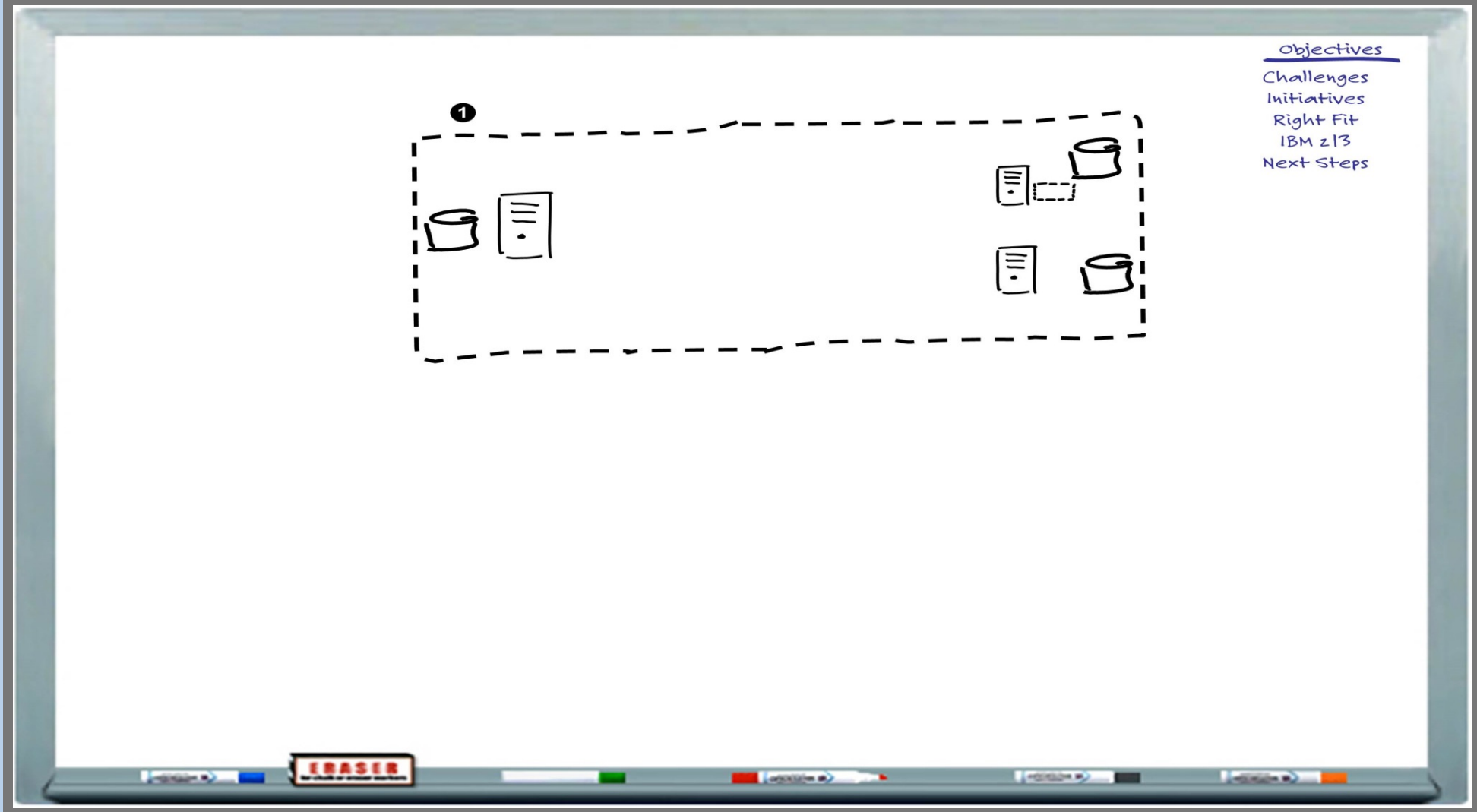
If you're like most of the companies we work with, your IT infrastructure is more than likely a mix of host systems (mainframes) and distributed systems managed in either a centralized and decentralized manner.

And if you are like others, this heterogeneous environment coupled with the dynamics of today's business environment creates some "interesting challenges" for IT organizations.

QUESTIONS TO ASK

What's your environment look like today? Any specific plans for changes to how you are running your operations?

Step 2 - The IT Infrastructure



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Step 3 - Challenges

1 **[Challenges]** The challenges that are most often mentioned in CIO and CEO studies relate to dealing with Change and Complexity – and the issues associated with several specific areas.

2 **[Data]** Dealing with the tremendous growth in the amount of data and how to increase the value of that data to the organization. Data is coming from more sources than ever before – how we integrate and then use it to drive our business decisions, our IT infrastructure and business processes has become a critical challenge.

3 **[Graph]** Delivering new services to meet market, customer and internal user demands as well as leveraging or modernizing existing workloads to take advantage of new technology. While at the same time making sure that these services meet appropriate or required Quality of Service objectives.

4 **[Do More with Less Icon]** It can be called Doing More with Less but for most IT management the challenge is how do you get the most out of your resources and your $$$ – whether this is your IT infrastructure, your human resources or your capital resources, it's all about maximizing operational and financial efficiency.

5 **[Person and chute]** Reducing or mitigating risk, managing compliance and addressing security requirements. With more users, more devices, a more connected world – risk, compliance and security are increasingly more important and difficult to deal with. It's not just an issue of protecting users and data, it's also securing applications and the infrastructure itself.

6 **[**What's on your list?] Which challenges are most problematic? Is there any priority to addressing the challenges?

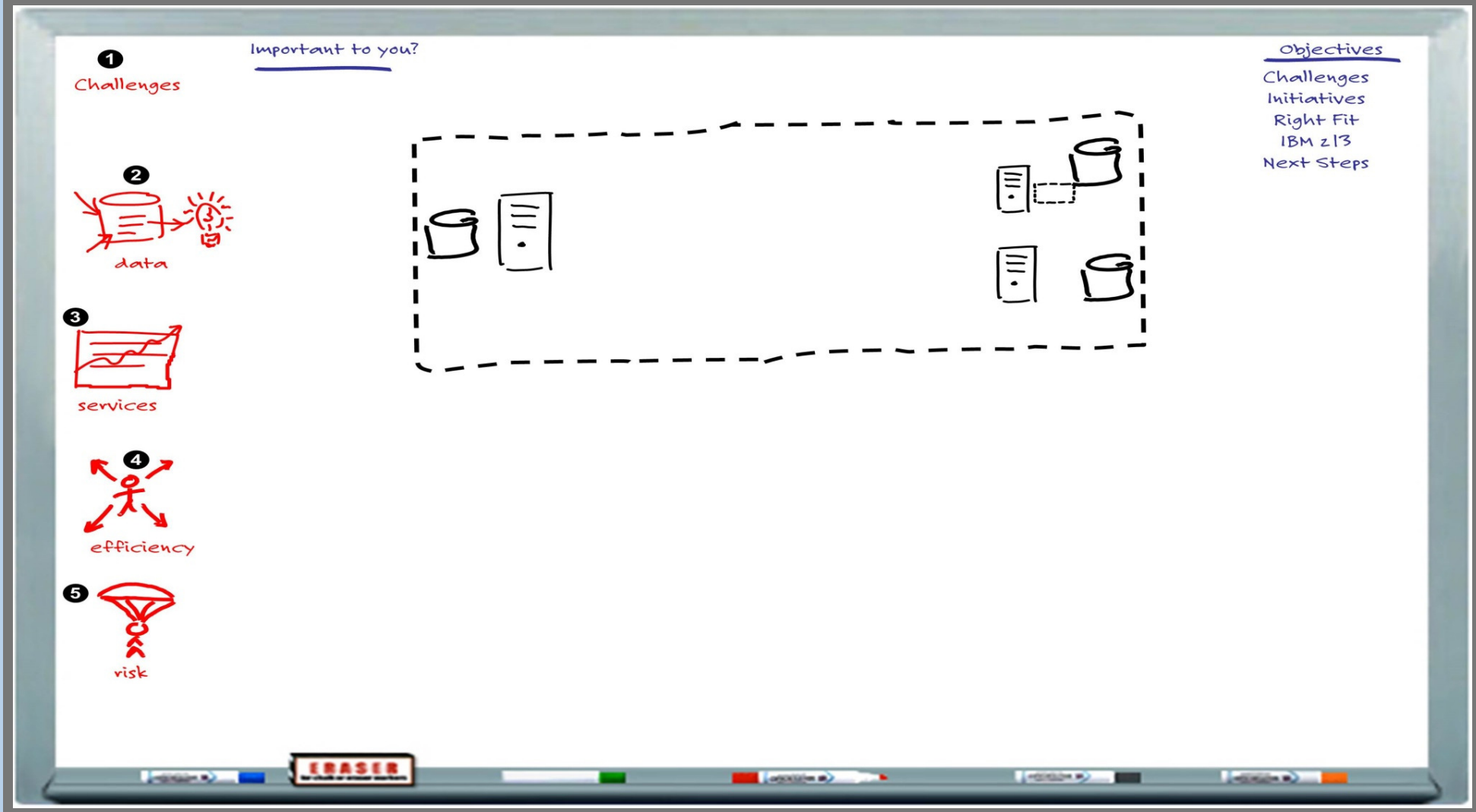
OBJECTIONS

[NOTE to Presenter: The key upfront is to get the customer to identify the issues or challenges which are mot important to them. You can start the discussion with ideas below but the key is to make sure that this section align with the customer – some of these items may not be appropriate for the customer you are meeting with – don't force an issue – when you do list them out - present these in the order that makes sense for this customer]

A good flow can also result by drawing and talking to the four challenges with the comment: "The challenges we most often hear from our customers fall into four categories…" - then draw and speak to them. Then, ask the customer, "Which of these are your greatest concerns?" and "Are there any other challenges that are more pressing?"

Write their comments in the "Important to You?" column.]

Step 3 - Challenges



Step 4 - Key IT Priorities

[NOTE to Presenter: The key upfront is to get the customer to identify their BIG priorities – you can use these as a way to identify this Client's specific list]

Our studies and those of firms like Gartner and others indicate that there are several IT initiatives that organizations are undertaking or looking at undertaking to address these challenges – although each of these initiatives may also add to the challenge list as well.

[Analytics] To get more value from data, organizations are increasing their use of business intelligence and analytics technologies throughout the organization, whether this is leveraging them for sales, marketing, customer care or IT operations. The "embedding" of analytics into the operations of the enterprise has become a high priority for many organizations.

[Mobile and Collaboration] With more mobile and remote workers, with changing end-user preferences for accessing services or applications through their favorite device, – extending existing services or delivering new services that incorporate or support mobility is important but often challenging. With more distributed workforces and people being "everywhere" there is also an increased need to provide support for secure, reliable collaboration across the enterprise (or the extended enterprise).

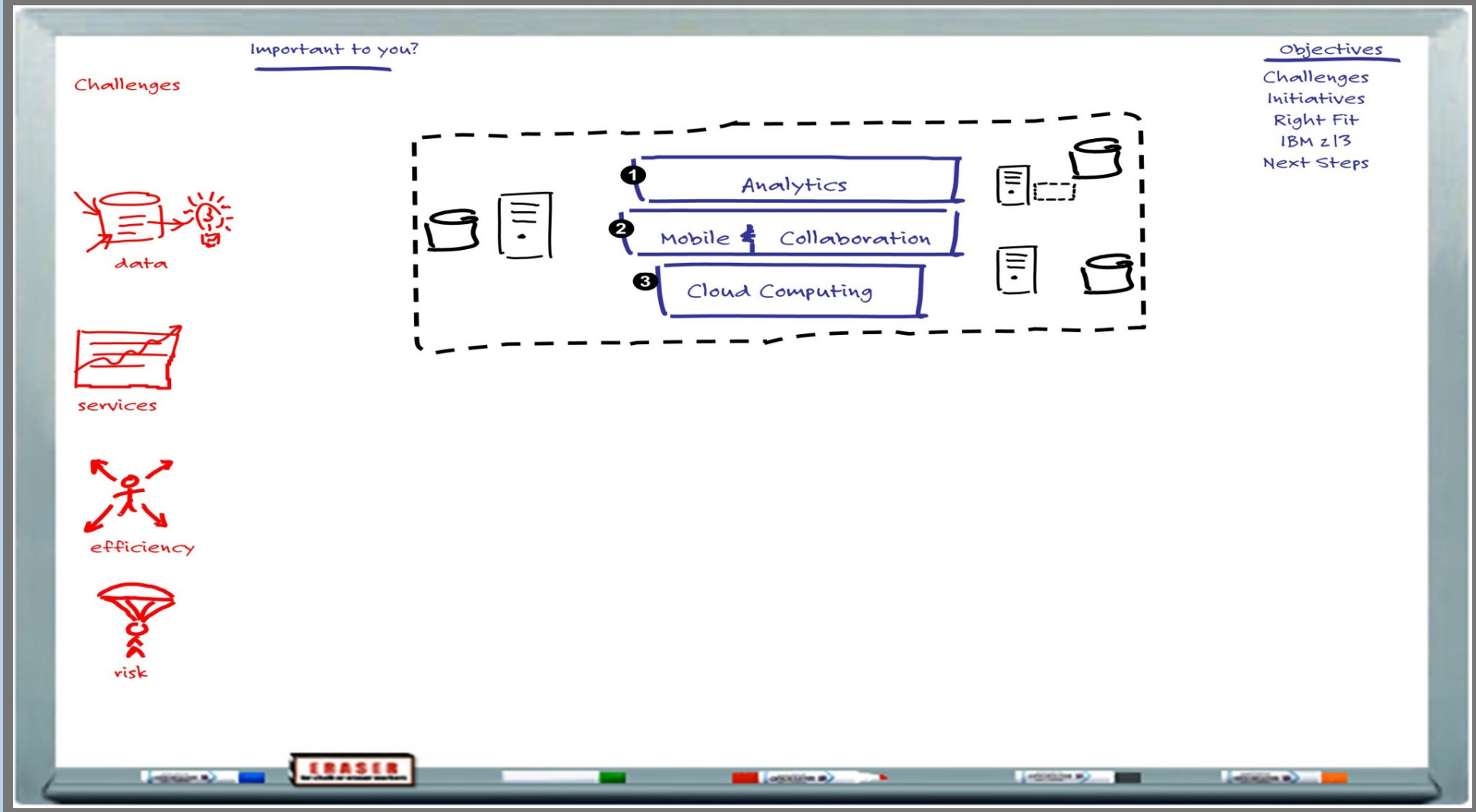
[Cloud Computing] Studies indicate that 80-90% of enterprises are doing "something" with Cloud Computing. Whether this is leveraging Public Cloud SAAS, IAAS or PAAS or putting in place a Private or Hybrid Cloud environment – the Cloud has become important both as a way to enable IT to be more efficient but also as a way for IT to enable the business to rethink the way it operates, how it can deliver new services. reach new users and markets, and better serve employees, partners and customers.

Security has become a great importance for customers, I will touch on that latter in our discussion.

QUESTIONS TO ASK

Do these resonate with your priorities? Are there others?

Step 4 - Key IT Priorities



Step 5 - Key Requirements & Considerations

What are these QOS requirements? Think about it this way.

1 **[Draw out a large triangle in black]** Businesses purchase, develop and deploy applications "to do" certain things – allow customers to order their product online; provide executives a dashboard to view the health of their business; enable employees to perform the accounts payable and accounts receivable processes.

You know WHAT you want the application TO DO.

HOW do you want the application TO BE? For example...

2 **[Scalable]** How capable is the infrastructure in scaling to meet growth in data, users, transactions? And scale without requiring major changes to the application or purchase of more hardware?

3 **[Dynamic]** What is required to add or remove resources – and how quickly can those resources be brought online (or taken down) to meet demands? Does the infrastructure automate any of this?

Let's say you are deploying an Analytics application to be used by 60 business analysts. Then, you hear rumor that the executives want to make this tool available to all 6,000 of their managers.

Can the system scale up to this demand? **Can changes to the system be implemented in a reasonable time? How long will this take – minutes and hours? or days, weeks and months?**

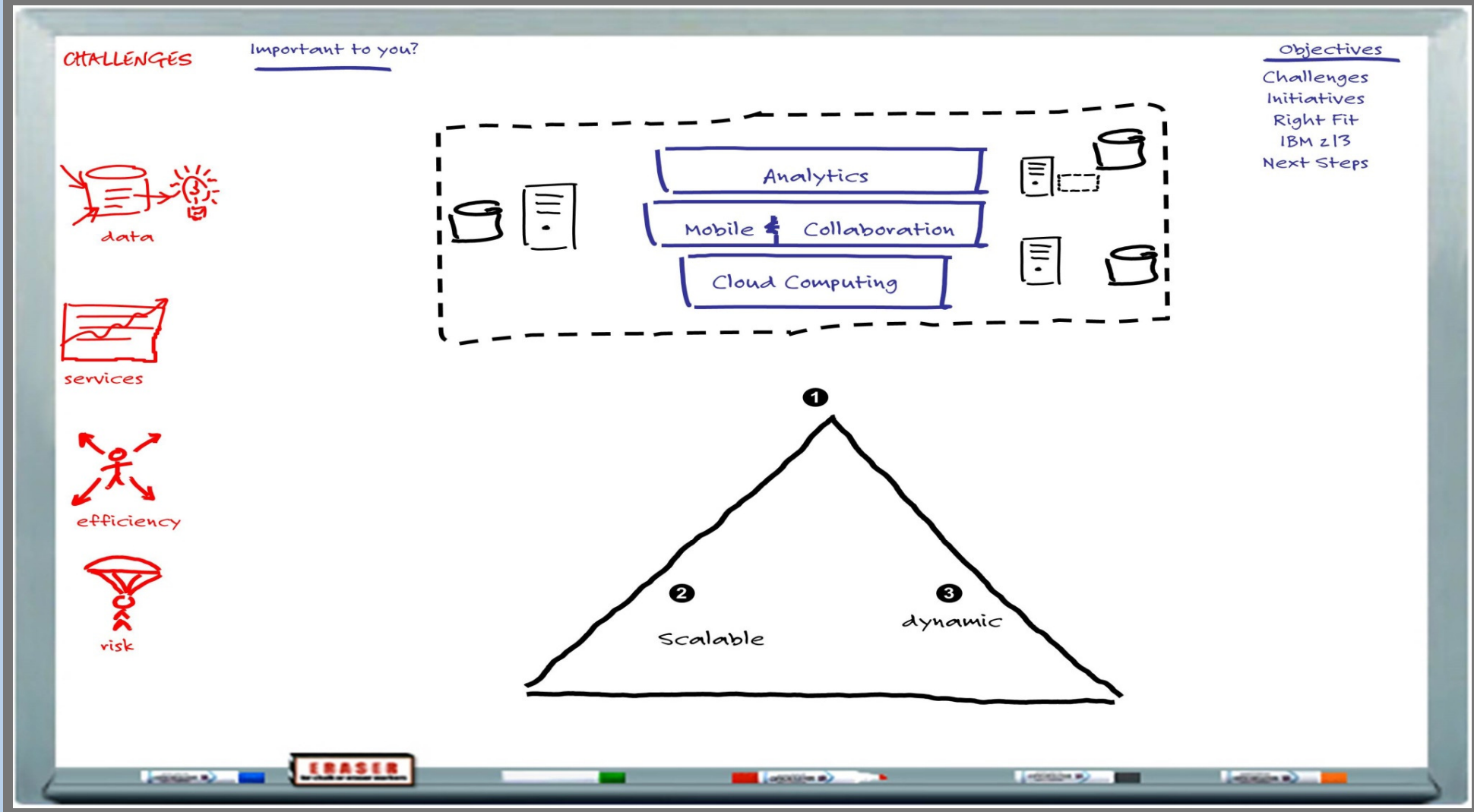
How else would you answer this question – "How do you want the application TO BE?

QUESTIONS TO ASK

Based on your priorities – what is most important to you now? As you look to the future, will there be other criteria which will be more important?

Is your current infrastructure dealing effectively with the key requirements?

Step 5 - Key Requirements & Considerations



Step 6 -Key Requirements & Considerations - Part 2

[Note to Presenter – Draw out the answers from your customer. They will most likely call out the ones listed below, but also write down any others they might mention]

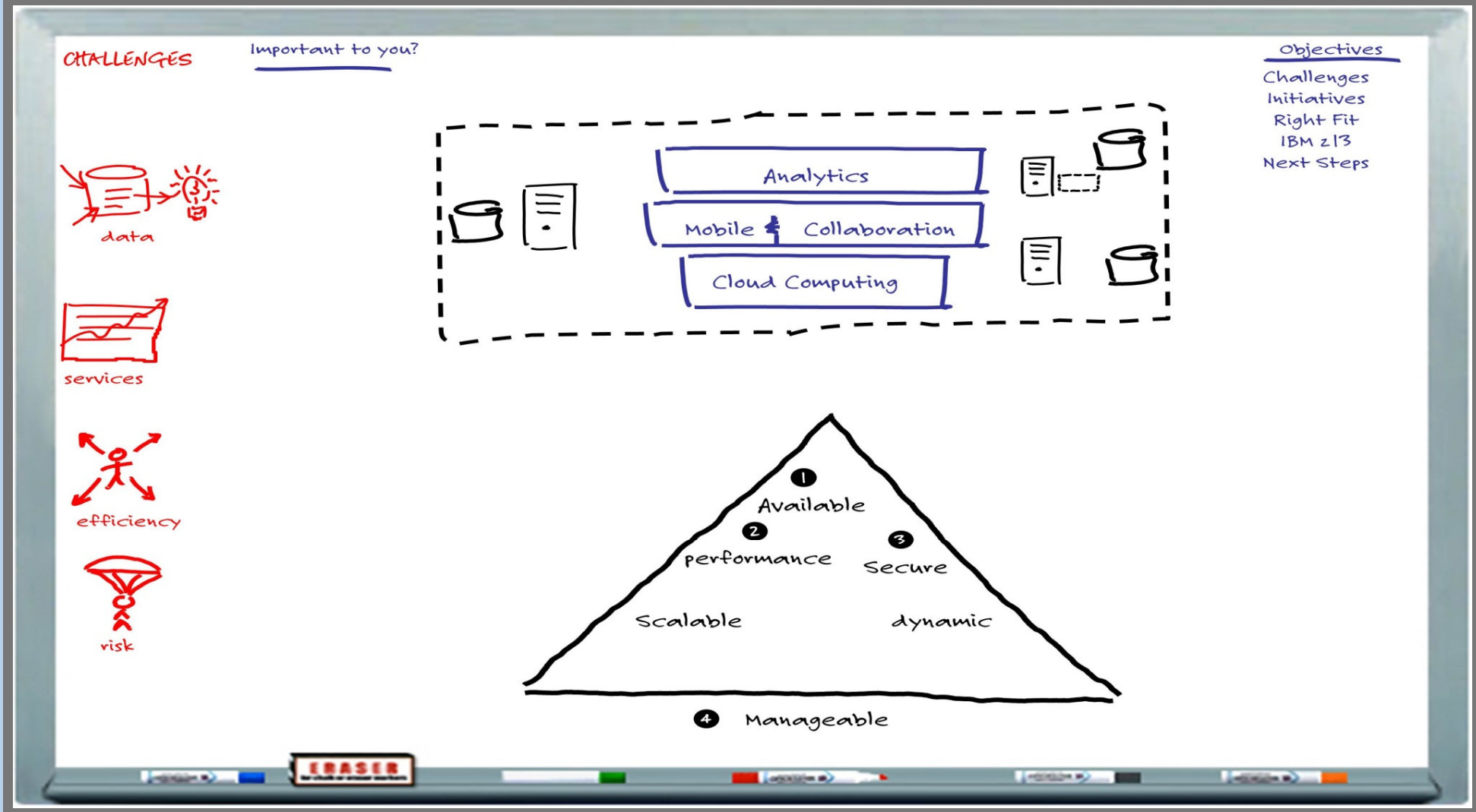
1. **[Available]** This relates to planned and unplanned "downtime". How critical is the application? If it goes down – how soon do I start losing customers and money? Can I meet either internal or regulatory RTO or RPO mandates?

2. **[Performance]** Will the infrastructure provide the performance required for dealing with more complex analytics, more and different types of data, supporting more users with expectations for instant response – especially with the Cloud.

3. **[Secure]** What is our exposure to new security risks? Are my applications and network infrastructure secure? Can the infrastructure meet the internal & external security requirements? Will it help me more easily manage compliance?

4. **[Manageable]** What will it take to effectively manage all of the key infrastructure components as new apps and workloads are added? Does the platform "help" manage costs – space, power and cooling? Does it provide capabilities to address staffing resources – automation, use of industry standards, etc.

Step 6 -Key Requirements & Considerations - Part 2



Step 7 - The Right Fit

1. **[Add a black line at the top of the triangle]**

2. **[Write "Affordability" on the left in black]**

3. **[Write "QOS" on the right in black]**

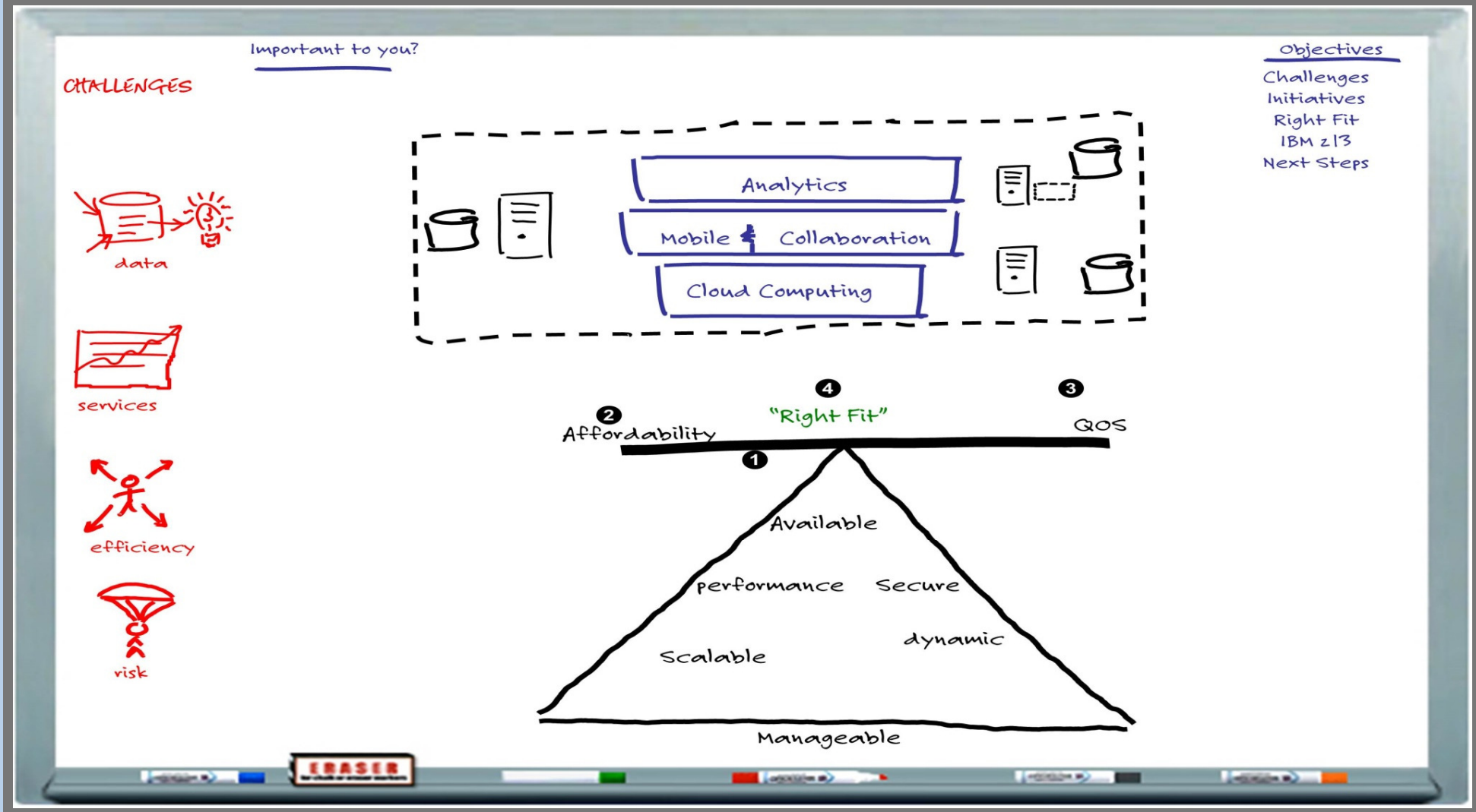
The question that many customers ultimately face is, "Which infrastructure will not only enable us to address the challenges and initiatives, but also allow us to balance the cost of the infrastructure – (Affordability) - with the ability to meet the key Quality of Service (QOS) requirements?"

4. **["RIGHT FIT" – Write in GREEN]** What this means is finding a platform infrastructure which is the "Right Fit" or "Best Fit" to support the specific workload whether this relates to Analytics, Mobile & Collaboration, Cloud Computing, or other key priorities like security. A platform infrastructure which can support the functional and QOS requirements but is also the most affordable - providing the low Total Cost of Operations (or Ownership) - based not only on the cost of the hardware, but also on software licenses, and the other resources required to operate and manage the solution, including, people, space, energy, etc.

QUESTIONS TO ASK

Does this make sense? Is this how you and your organization look at the challenge of which platform? If not, how do you?

Step 7 - The Right Fit



Step 8 - System z13

1 I'd like to give you a sense of how z Systems can help an organization deal with their key priorities, in terms of these requirements.

2 **Available** – The reputation of z Systems for rock-solid **99.999%** availability (less than 5 minutes of downtime per year) is indisputable. And there are many z customers who have not gone down in over a decade. This is why the world's top 25 banks use the z Systems family of solutions. Add the z13 GDPS support for Linux and the overall availability has just significant risen.

3 **Performance** – z Systems has up to 141 of the **fastest** processors in the industry. And, in addition, z Systems has capabilities, such as, query acceleration, which is why Swiss Re saw their queries accelerated over 1,000 times faster by adding IBM DB2 Analytics Accelerator. Add to that z13's 10TB of memory and greater speed and I/O capacity, overall performance is is much greater than the zEC12.

5 **Scalable** - with its "share everything" design, z Systems can scale up (and down) very easily and many times automatically based on business rules provided to the system. This is why Nationwide was able to decrease their provisioning time by over 80% by consolidating their workloads onto z Systems.

6 **Secure** - The intrinsic platform security and privacy for transactions and sensitive data helps enable z Systems to be the secure enterprise application server and data vault. z13 has a cryptographic coprocessor "Our business is to a very large extent built on trust, and having IBM's secure, encrypted systems helps build that **trust** with our consumers" BlueCross/Blue Shield of Tennessee. Another customer, IZB, after performing penetration tests (i.e. "Can you hack me?") on all of their platforms, confidently said that System z was the **"Safest Box"** in their environment.

7 **Dynamic** - z Systems automatically moves compute resources to where the business needs them. With advanced workload management, System z makes sure the applications have the resources they need without impacting service delivery. It incorporates "extreme" Virtualization. This is how the Queensland Government, Dept of Transportation was able to meet their scaling and resiliency requirements.

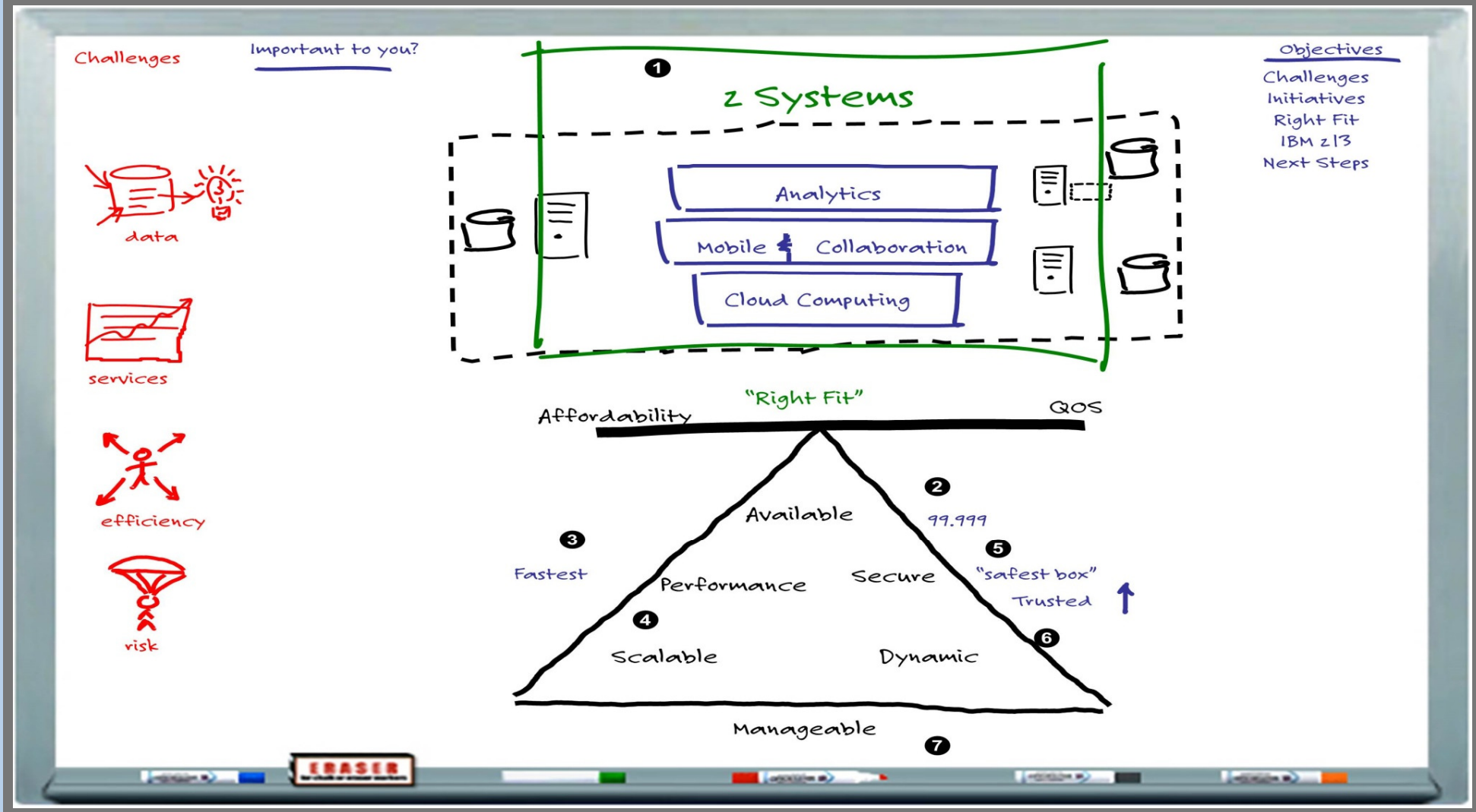
8 **Manageable** - z Systems have had features to assist in the managing the system this includes adding processors without interrupting the system. For the zEC12 IBM announced zWare which provides Analytics for z/OS to predict a problem before it occurs. Today z Systems have the capability to manage a large number partitions (LPARs) and allow you to specify how much of the system will be given to each LPAR.

OBJECTIONS

I'm not sure how zEnterprise helps with Mobile...

RESPONSE: Using the IBM Worklight solution for Mobile Application Platforms with Rational Developer for zEnterprise, programmers can build, manage and integrate more easily – bringing the value of zEnterprise based applications to mobile devices

Step 8 - System z13



Step 9 - IBM z13

IBM's recently announced z13 “better" enable customers to deal with the requirements of CAMSS.

1 **z Systems - z13** incorporates some of the latest technologies in the industry today: the latest processor is in the z Systems family of processors, wider I/O band width, compression and encryption coprocessors are on each chip.

2 **[Availability] - IBM zAware** is a self learning, integrated expert solution that analyzes System z messages in near real time to provide insight into the behavior of your system and helps quickly find and eliminate problems, improving overall availability of applications. Previously available only for z/OS, now supports Linux on the z13.

3 **[Performance]** With changes in chip technology, frequency is no longer the primary means of achieving superior peroformance. Here are a few ways that the z13 achieves performace gains over the EC12. Increased instruction parallelismwith new instructions, 10TB memory (3X of EC12) compression and encroption coprocessors on the same chip with the z13 procsessors are just a few.

4 **[Throughput]** This is heavily dependant on your workload, but z13 has **40%** more capacity than z/OS on zEC12. Linux on an IFL has 32%. 10TB of memory and the additional channel capacity, the z13 increase throughput makes it ideal for running analytics as well as heavy transactional workload like mobile.

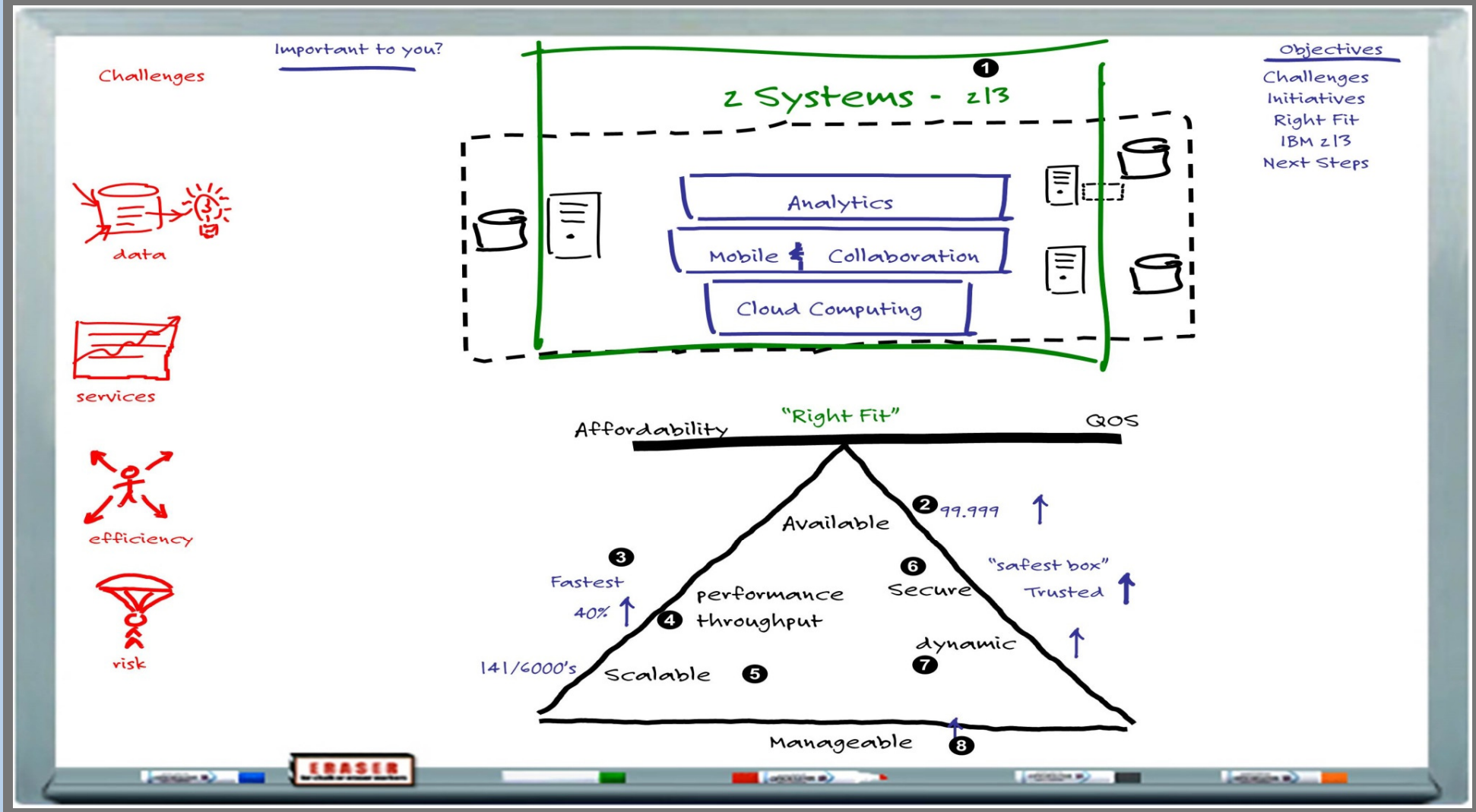
5 **Scalability** – z13 can scale up to **141** CPUs and supports up to **6000** virtual machines, providing both scale up and scale out capabilities in one system.

6 **Security** – The intrinsic platform securty and privacy for trtansactions and sensitive data helps enable z Systems to be the secure enterprise application server and data vault. z13 employs multiple integrated crytographic coprocessors integrated into each central processor chip. This coprocessor is exclusive to z Systems and protects the sensitive keys from applications and operating system. And of course z13 continues to be EAL5+ certified.

7 **Dynamic –** the z13 capabilities continue to build on z Systems and the ability to dynamically manage resources and thousands of virtual application stacks including the support of up to 6000 Linux systems. this flexibility is what you need to support the Cloud.

8 **Manageability** – IBM has strengthened the management of Linux by introducing Enterprise Linux. With GDPS SOD for Linux and an inhanced zAware which supports Linux providing operations with the ability to determine that a problem is about to occur.

Step 9 - IBM z13



Step 10 - Customer Examples

1. **Analytics - [Swiss RE - 2.6B-70% Up-75% Down]** Swiss Re - Performed data analytics and reporting on over **2.6B transactions** and records with the IBM DB2 Analytics Accelerator resulting in **70% improvement in query response times**. Query times that ranged previously from 25 seconds to 90 minutes now take 8 seconds or less with IBM DB2 Analytics Accelerator. This solution delivers 5 times the performance at **75% lower cost** (3-yr TCO) compared to competition.

2. **Cloud Computing** - **University of Bari** (Italy) has implemented a set of services to help local businesses adopt new business models. Three cloud-based services are currently available: **Fish Market**—Fishermen can use a touch screen installed on the boat to describe the kinds of fish being caught. If that type of fish is required by the market, the solution starts an electronic auction. The system automatically defines how the quantity should be distributed so fishermen arrive at the pier with boxes ready to be shipped. **Helping to make the supply chain more efficient and reduce waste. Wine Market**—Which is enabling winemakers to source grapes more effectively to **improve product quality**. A Logistics and delivery service which incorporates components installed on trucks and a Linux on System z server. The server monitors trucks in real time helping truck companies avoid damaging transported goods and improving **shipping time for products from eight to four hours.**

3. **Mobility - FNB South Africa -** The IBM z13 is the intersection of data and engagement - linking the transaction engine and big data with the mobile era to domore and do it faster - Key wne response tinme equals customer loyalty. Simutaneous multi=threading and 10TB of memory helps mobile applicaitons**.** 141 cores and 66% more I/O band width means the z13 can seamlessly handle mobile transaction growth in a single footprint.
For example, at FNB (First National Bank) with their system-enabled mobile applications, they have more than 150 million monthly mobile banking transactions, all operating with less than 30 milliseconds end-to-end response time.

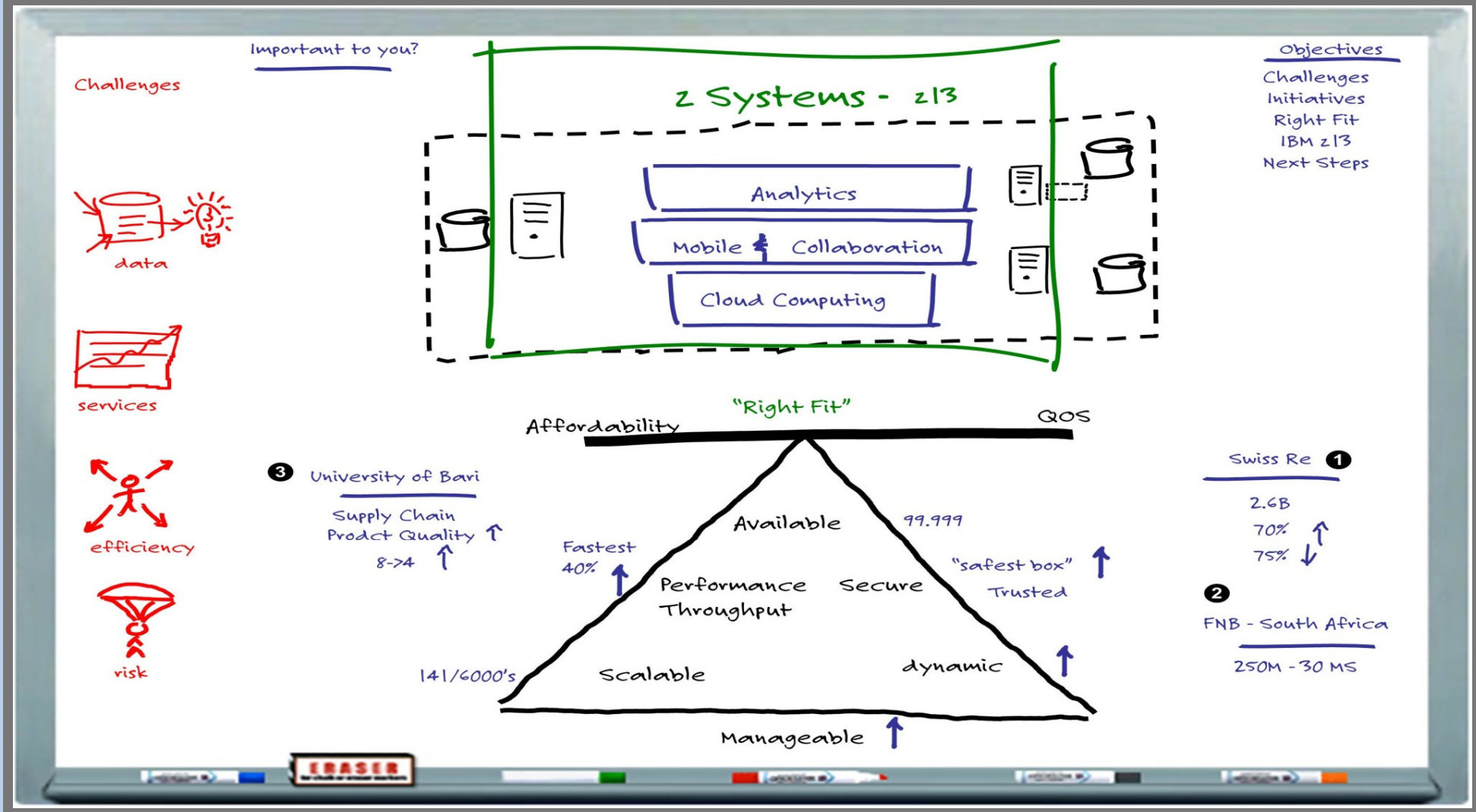
OBJECTIONS

NOTE to Presenter: The examples provided outline how System z and zEnterprise support the Key IT priorities. You should check for customer examples or references which align with your client, in terms of Priorities and Challenges.

Case Studies:

Swiss Re Case Study - http://www-01.ibm.com/software/success/cssdb.nsf/CS/JJAE-8SEVYN?OpenDocument&Site=corp&cty=en_us University of Bari Case Study - http://www-01.ibm.com/software/success/cssdb.nsf/CS/ARBN-8EEQKV

Step 10 - Customer Examples



Step 11 - Recap & Next Steps

IBM z13 extends System z's ability to meet your critical information system requirements and deliver the Right Fit for your high priority workloads and enable you to deal with the challenges that we discussed at the beginning. In particular …

1. Provide you with the ability to drive more insights from the data you have across the organization. **(A)** Giving you a platform which will enable you to integrate together large amounts and types of data from different sources into "single" platform which can effectively enable analytics of all types. **(B)** Keeping your source data where it is and leveraging the analytic strengths of zEnterprise as an Analytics Hub.

2. Enable you to deliver new services in a more timely fashion by taking advantage of the capabilities of zEnterprise which deliver the highest levels of support for key QOS – highest levels of security, availability, resiliency, performance. To also be able to leverage existing – legacy – workloads in new ways – whether this is making them available through the cloud – with new modern front-end access – integrating them with mobile technologies.

3. Create a more operationally efficient operation – whether this is maximizing financial efficiency through a "lease-refresh-scale-out" approach by working with IBM Global Financing. Helping you to maximize the use of your OPEX or CAPEX funds. The ability to get resource efficiencies by running 1000's of workloads in up to 6000 virtual machines in a single platform – whether those are direct cost efficiencies or reducing the personnel resources required to manage the environment.

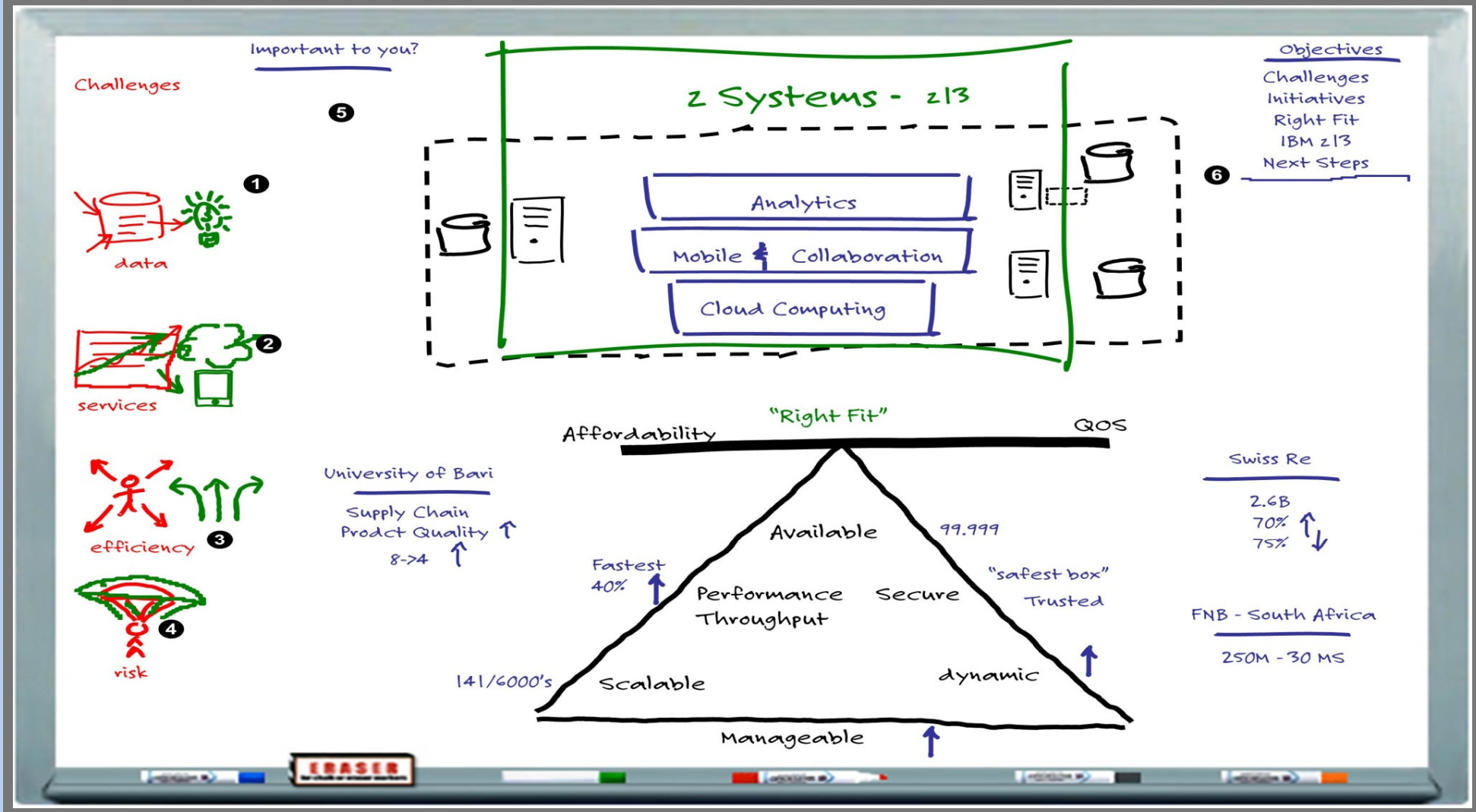
4. Lastly, provide you with the most secure environment to help you mitigate risk and ensure that your workloads are secure at all levels from infrastructure, to information, to applications to the users themselves.

5. During our session you indicated that the following were important to you…Is that correct?

6. Based on what we've talked about and the areas which you identified as key challenges, I'd like to recommend that we set up**:**
[Could be any of the following or another more specific session for the client – See the Addendum for Suggestions]

Thanks for your time. I look forward to setting up the follow-up session and to working with you and your team.

Step 11 - Recap & Next Steps



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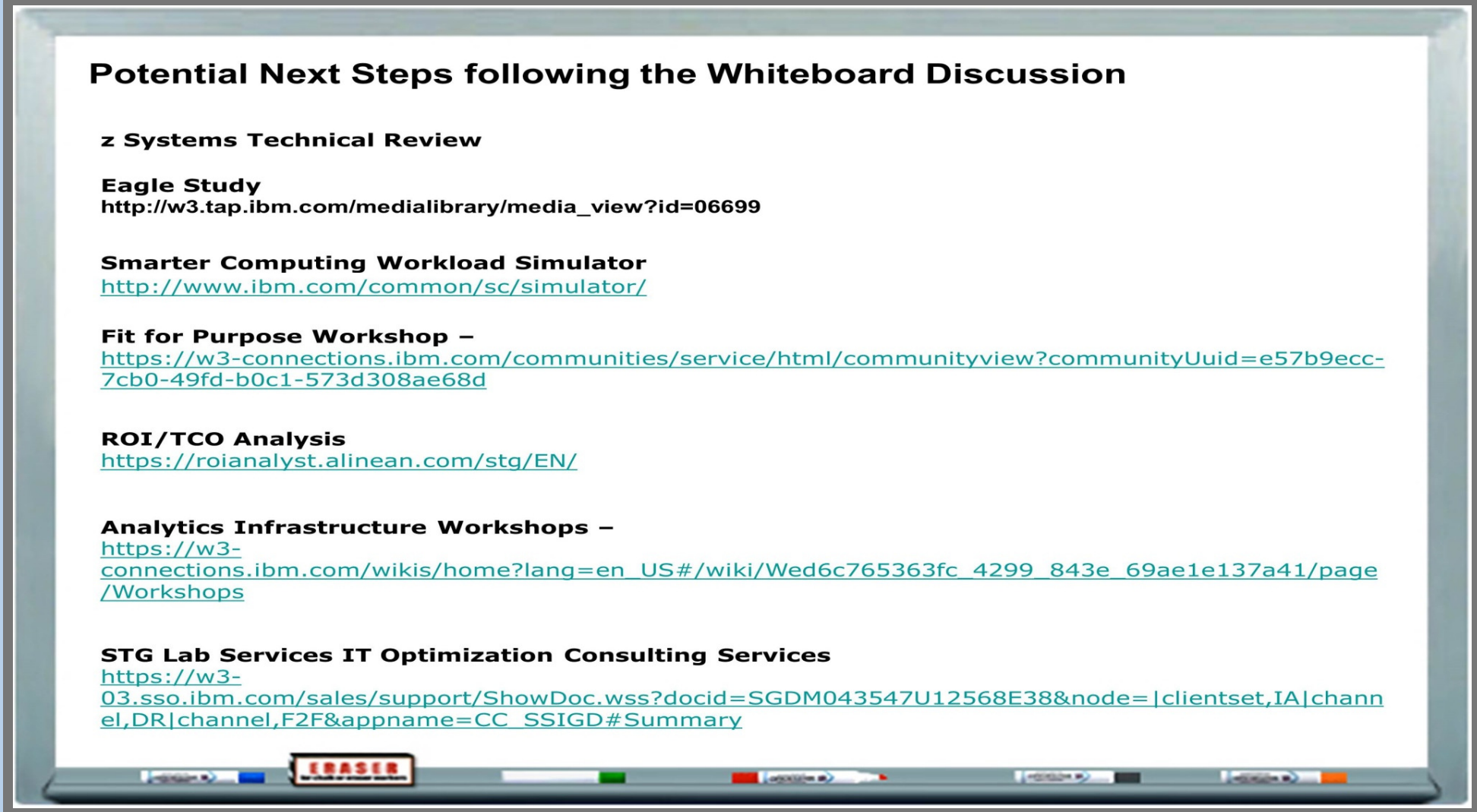
Addendum - Potential Next Steps

Brief description of potential next steps

Addendum - Potential Next Steps



Additional Customer Examples

Additional Customer Examples

Additional Examples & Industry Comments on z Systems

Cloud & Analytics – IBM Blue Insight – The IBM internal Private Analytics Cloud - private cloud delivery of Cognos via System z, has put the power of information into more users hands for smarter, faster decision-making, making the promise of BI a reality organization-wide. Consolidated 115 multi-product, departmental BI deployments to 1 Cognos BI on System z. Support for over half of our global workforce: 200K+
Realizing value from +60 data sources across IBM. $25M in savings (60% Consolidation, 35% Standardization, 5% Automation
Case Study - http://www-01.ibm.com/software/success/cssdb.nsf/CS/STRD-8U4FCL?OpenDocument&Site=corp&cty=en_us

Analytics –_Miami-Dade County selected the IBM System z platform to expand their IBM Cognos business intelligence enterprise infrastructure. The results? - users from over 42 County departments with over 1500 users creating and consuming reports with stable environments on System z.-11 days to go from distributed to System z deployment model - Consolidated multiple BI deployments onto a single platform - Consolidate multiple, disparate data sources onto a single platform - Ensured 99.999% availability & complete disaster recovery plan.

- **EC12** - "Overall, IBM's latest improvements in System z performance make it difficult to envision any job being too large for a properly configured zEC12. In addition, many of those enhancements translate directly to data center management tasks. For example, enterprise IT complexity and rate of change is accelerating so quickly that what once might have been classified as minor system anomalies can now measurably impact SLAs. By using IBM's new IBM zAware, which leverages advanced analytics to monitor OPERLOG messages and detect inconsistencies in near real time, organizations can catch minor problems before they become major and speed time to recovery. Just as important, along with mechanizing complex log data analysis, IBM zAware also leverages cutting edge pattern recognition, machine learning and modeling to adjust for the unique aspects of every IT environment."
- - PUND-IT, Inc. Weekly Review, August 29, 2012

- **z13** – With the announcement of the z13, zAware has been expanded to support Linux on z Systems