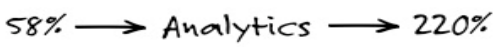
z Systems for Analytics

Solution Whiteboard Storyboard

Version 2015-01-05

CORPORATE VISIONS
Conversations That Win™

1. SETTING THE STAGE



<WRITE "Analytics"> Thanks for taking the time to get together to talk about how you are supporting analytics.

Most executives we talk with tell us that analytics has become more mainstream across their organization and are now embedded into the day-to-day activities of most functions. In fact, there was a recent study by IBM and MIT where 58% of executives surveyed cited analytics **<DRAW arrow WRITE "58%">** as the means by which they are creating competitive advantage. In that same study, companies who indicated they used analytics had 220% better performance than those that did not. **<DRAW arrow WRITE "220%">**

With analytics growing in importance and more users demanding access to analytics to do their jobs, having an environment to meet their diverse demands with the right functionality, the right data, in the right timeframe has become a real challenge.

What I'd like to talk about is how you can simplify your analytics infrastructure; meet your various analytic and reporting needs today in the future.

QUESTIONS TO ASK:

What types of analytics or analytics projects are critical to your organization today?
Are there any new projects that are business critical? What departments are undertaking those projects?
What role are you and your team playing in those projects?

NOTES TO PRESENTER:

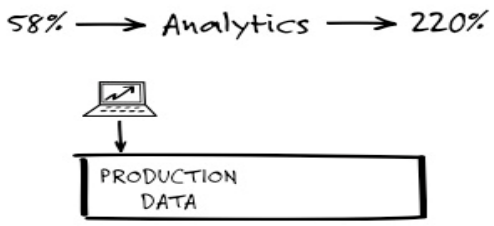
Do your homework before the meeting. Understand as much as possible about the audience as possible – their current analytics environment, projects underway, projects that have been successful, projects that have failed, organizational changes that might impact IT (mergers, acquisitions, restructuring, etc.)

You should be prepared with customer examples that will be relevant to the audience in terms of industry, region, size of organization, etc.

Many of these opportunities may involve or 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.

The Study referenced above is an IBM Business Value Study conducted in conjunction with MIT in 2011.

2. PRODUCTION DATA – THE START



No matter what analytics you are talking about it all starts with data, in particular the data that is generated by your core business systems. **<DRAW rectangle WRITE "Production" DRAW icon - down arrow>**

This data can provide real business value if used in a timely and meaningful way. But can also present any number of challenges. I'd like to take a couple of minutes to discuss how organizations we work with are leveraging that data today and some of the challenges they face. And see how that aligns with your current environment.

QUESTIONS TO ASK:

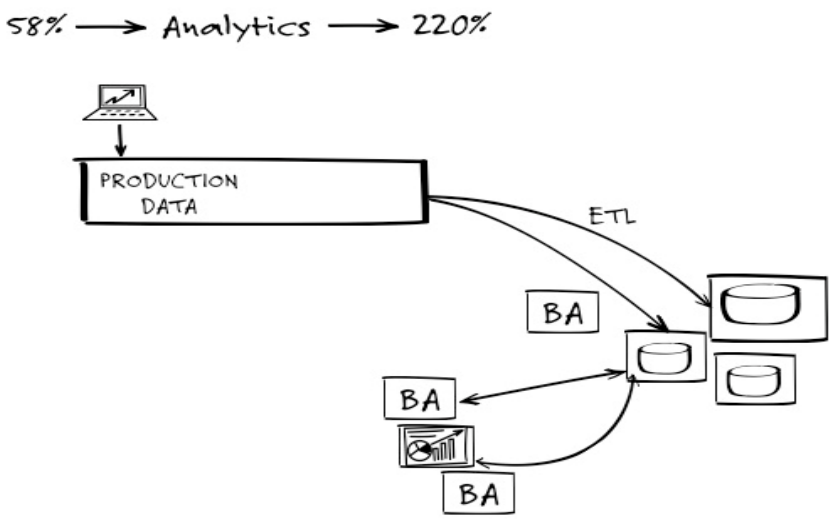
What does your production environment look like today? What are your key production systems and where do they currently run?
Has that changed over the last several years? Do you envision any changes in the future?
What would those changes be?

POTENTIAL OBJECTIONS & RESPONSES:

OBJECTION: Our current production environment is highly mixed. We run some legacy systems on z Systems but we have an increasing number of ISV production applications running on Unix with Oracle. We also have a few highly important applications that are running in the Cloud (Software-as-a-Service).

RESPONSE: That's not unusual. Our discussion is not focused on where you're running those key applications but rather on where and how you're using that data that's generated by those applications.

3. AD-HOC AND COMPLEX ANALYTICS



What's also important to this discussion is to make sure we have a common way of looking at analytics.

For simplicity I'd like to look at from two perspectives – the first relates to ad-hoc or complex analytics. These analytics use data to research and develop intelligence about your business, your customers, your operations, and your markets.

This typically means having a data warehouse and/or departmental or functional data marts with separate servers and software infrastructure. **< DRAW data icons - arrows WRITE "ETL">** Where Extraction Transformation and Loading (ETL) tools are used to transfer and structure the data for analysis and reporting using any number of business analytics tools. **<DRAW boxes – icon – arrows – WRITE "BA">.**

QUESTIONS TO ASK:

What does your environment look like today?

What tools and technologies are you and other departments using?

Do you have any standards in place today?

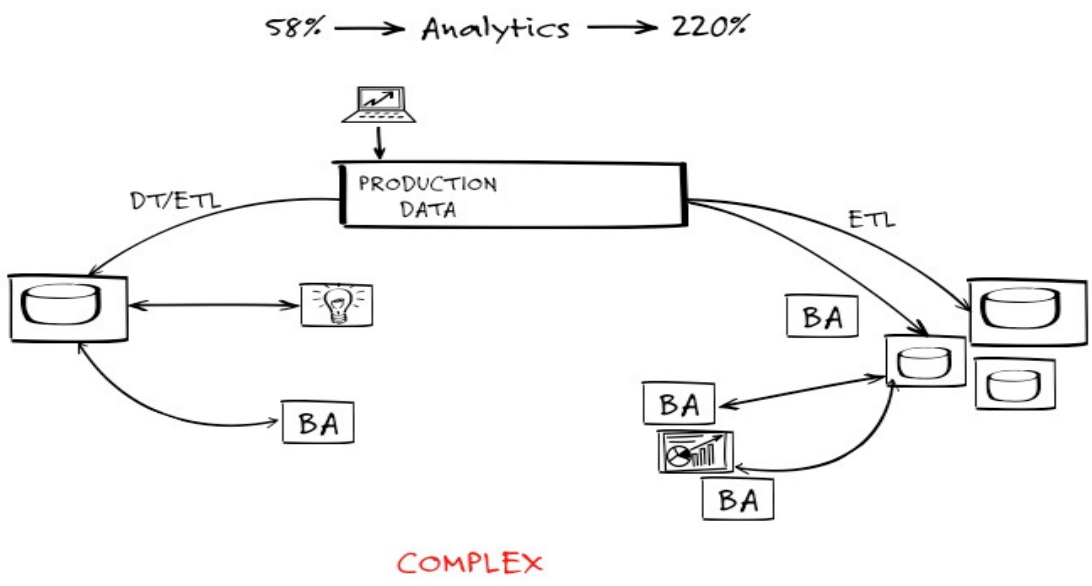
POTENTIAL OBJECTIONS & RESPONSES:

OBJECTION: We are using Oracle (or SQL Server) running on Windows servers for most of our data marts and our departments are fairly self-sufficient with respect to how it operates.

RESPONSE: Thanks. Again, we see that in many “shops” today. We have seen some challenges in those shops especially as analytics takes on a broader importance across the organization.

NOTE TO PRESENTER: At this point you could go to the discussion of Complexity and Challenges or suggest that we talk about some of the challenges that we quickly talk about another area of analytics that may be in place today that also has some similar challenges.

4. OPERATIONAL ANALYTICS



These same production or operational systems generate data that can be critical to better understand and influence customer behavior, product and services usage, etc. through **real-time** query and reporting and real-time mobile, fraud detection apps, point-of-sale or other apps.

This requires access to real-time data often stored in a real-time data store. **<DRAW data icon>** To support this, organizations go through much the same process we discussed with the ad-hoc world. **<DRAW – arrow WRITE "DT/ETL">** Moving data using data transfer or ETL tools.

And then taking advantage of query and reporting tools <**DRAW arrow – DRAW box – WRITE "BA">** or predictive or statistical analysis tools to support real-time reporting, analytics and applications. < **DRAW arrow - DRAW box – DRAW light bulb>**

<WRITE "Complex"> What we've just sketched out is simple picture of the complex environment that is in place in most organizations. Where data is being moved between platforms to separate data warehouses or data marts. Where disparate BA tools are being used on multiple platforms.

QUESTIONS TO ASK:

What does your environment look like today?

What tools and technologies are you and other departments using?

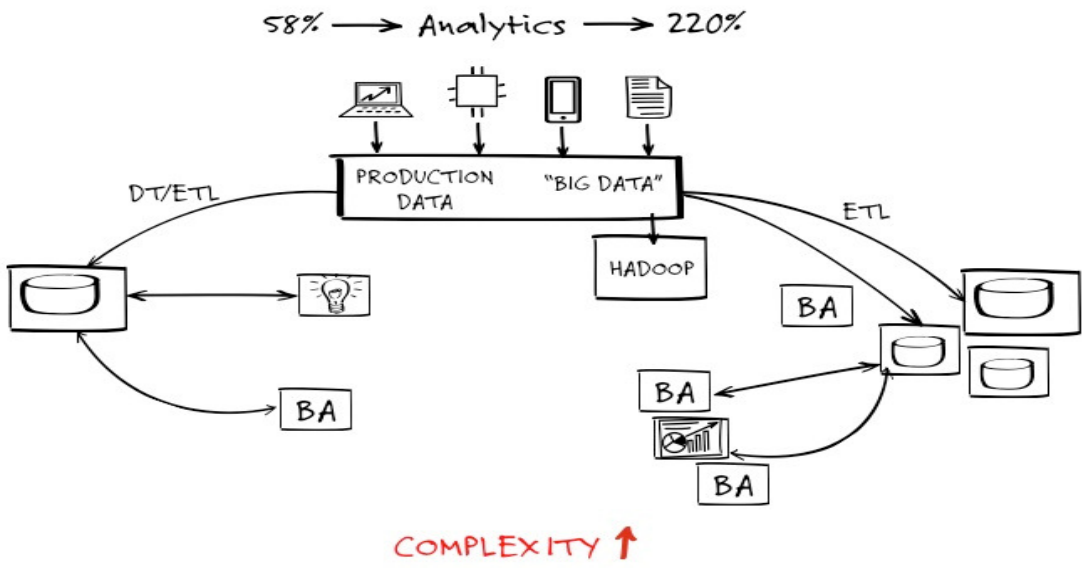
Do you have any standards in place today?

POTENTIAL OBJECTIONS & RESPONSES:

OBJECTION: We are beginning to look at (or we have started using) BAG DATA and the environment to support BAG DATA, in particular HADOOP.

RESPONSE: Thanks. That's something that many of our customers are pursuing,

5. BIG DATA – INCREASING COMPLEXITY



An issue facing many organizations is that this already complex world is getting more complex and costly **<WRITE "lty" DRAW up arrow>** in order to support new requirements or opportunities being created by Big Data. **<WRITE "Big Data">**

Depending on your situation you may have a variety of data coming from multiple sources – sensors - mobile devices – social media, etc. Most of it coming in faster than ever, in volumes that are staggering. **<DRAW icons DRAW down arrows>**.

To take advantage of the value of this data, organizations are loading data from multiple production, operational or web-based sources into **Hadoop** servers where they are using any number of tools to conduct analysis. **<DRAW down arrow DRAW box WRITE "Hadoop">**

QUESTIONS TO ASK:
Is your organization doing anything with Big Data today?
What sources are you using for data?
Are you using Hadoop or some other technology? Where is that running?
Is the Big Data project a departmental sponsored project?
What types of results have you had to date?

POTENTIAL OBJECTIONS & RESPONSES:

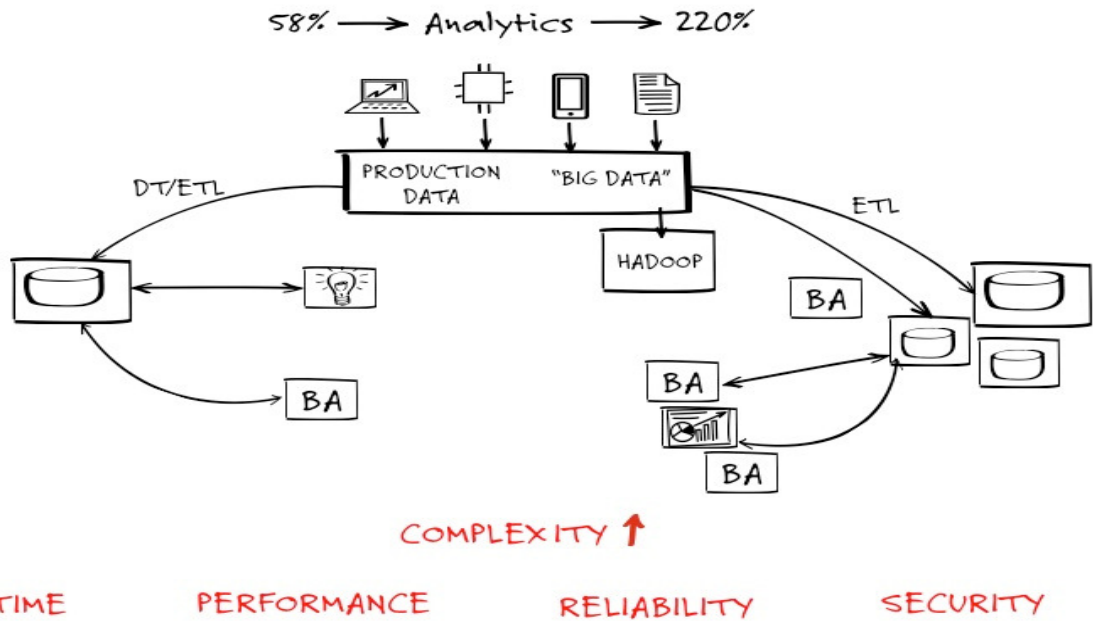
OBJECTION: We are running everything outside of our production environments on separate servers and are even looking at Cloud-based capabilities.

RESPONSE: Thanks. Many customers take this as a first step as they begin to take advantage of Big Data, but this approach along with the complexity of the rest of your analytics environment can make it difficult to address a number of key challenges.

TRANSITION NOTE TO PRESENTER: At this point, transition right to the next discussion on Challenges

NOTE TO PRESENTER: Going into the discussion, you should have some idea as to whether the customer has any activity going on with respect to Big Data or if Big Data is on their radar. If NOT, you should quickly transition through this section.

6. CHALLENGES



So, what are some of the **bigger** issues or challenges you may encounter supporting analytics the way we've just discussed both now and in the future?

<WRITE "Time"> **Time** is an issue. As our world becomes increasingly more real-time, if you have to move data to between platforms are you assured that the data being used for analysis is the most up-to-date data? With rapidly changing market and customer demands can you put in place or modify the environment "in-time" to meet the needs and requirements of the business?

<WRITE "Performance"> **Performance** – performance has implications across this entire infrastructure. Performance related to data access, query performance and processing, performance related to data loads for data marts and data warehouses; performance of analyses especially complex analyses.

<WRITE "Reliability"> **Reliability** – the reliability and integrity of the data. The old adage of "garbage in garbage out" has never been more relevant than in today's real-time analytics world. Critical business and life decisions are now being made by analytics applications – this means the data, the processing and the system environment have to be highly reliable and available.

Then there is **security**. **<WRITE "Security">** There is no question that the security of data being used to drive our operations is critical. There are so many different types of data that need different levels of security. With the movement across networks to data servers – there are increased challenges to ensure that key customer and transaction data is fully secured and protected. But it's also about the applications and the analytics that are being used. These are often critical to competitive differentiation or to key operations – they must be protected and secured.

QUESTIONS TO ASK:

Are these in line with some of the challenges you see going forward?
What other challenges do you and your organization face?
Which challenges are at the top of your list to deal with?
What are you doing today to mitigate some of these?

NOTE TO PRESENTER: For each category, you could add the key words or add descriptions which align with issues relevant to the audience.

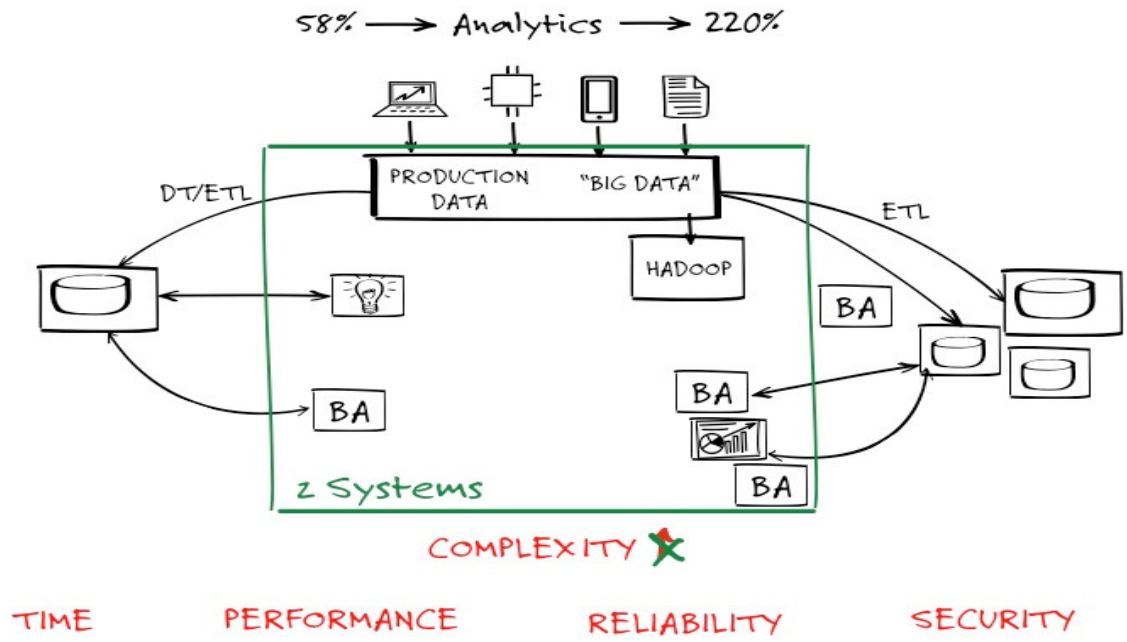
POTENTIAL OBJECTIONS & RESPONSES:

OBJECTION: We seem to be doing OK.

RESPONSE: Thanks. Many of the people we talk to say that. But what we have seen is that in most cases, OK is not enough to handle what's coming at organizations from a data and analytics perspective. With more and more data, with more and more challenges for companies to differentiate themselves or meet business objectives, having the right infrastructure is critical.

NOTE TO PRESENTER: Go to the next step.

7. Z SYSTEMS FOR ANALYTICS



It's against this backdrop where working with z System **<WRITE "z Systems">** can dramatically reduce complexity **<DRAW "X" over up arrow>** and can have an immediate impact on your analytics operations TODAY. But more importantly can help you leverage many of your existing tools and establish an environment that can better meet your future requirements.

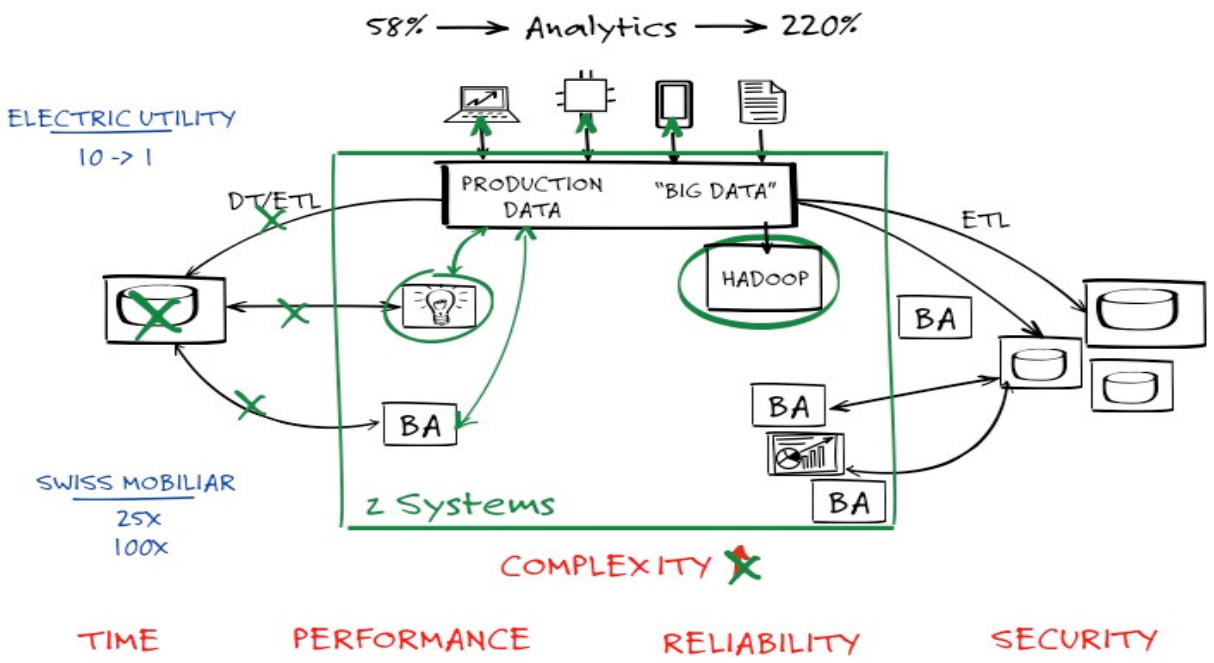
Let's look at what leveraging z Systems can mean to you.

POTENTIAL OBJECTIONS & RESPONSES:

OBJECTION: What is with the change to the name. Why are you going from System z to z Systems? Is this for real? This makes no sense to me.

RESPONSE: As the IBM Systems for digital business mature and evolve, product line naming will continue to evolve along with it. We are taking these new releases as an opportunity to make this name change and to further signal the evolution of our products while maintaining brand equity in "z".

8. Z SYSTEMS SUPPORTING OPERATIONAL-REAL-TIME ANALYTICS



First, from an operational or real-time perspective.

You can eliminate the need for separate platforms or environments. **<DRAW "X" over data icon>**. And even if a data store is required it can be co-located in z Systems eliminating the timeliness, security, cost and complexity issues associated with using Data Transfer or ETL tools and other platforms. **<DRAW "X" over DT/ETL>**

This is particularly true with Big Data. With new capabilities to support HADOOP you can have a single environment to support both transactional and "Big Data" in one platform. **<DRAW circle>**

With z Systems, you have a platform that can support large numbers of concurrent query and reporting users and provide the same exceptional query and analytics performance for ALL users. **<DRAW "X" over arrow DRAW up arrow>**

And, as the requirement to tie together transactional systems and Big Data with real-time analytics becomes more business critical – with z Systems you can run predictive analysis tools and incorporate them into transactional applications all within one environment. **<DRAW "X" over arrow DRAW circle DRAW up arrow to box DRAW up arrows to icons>**

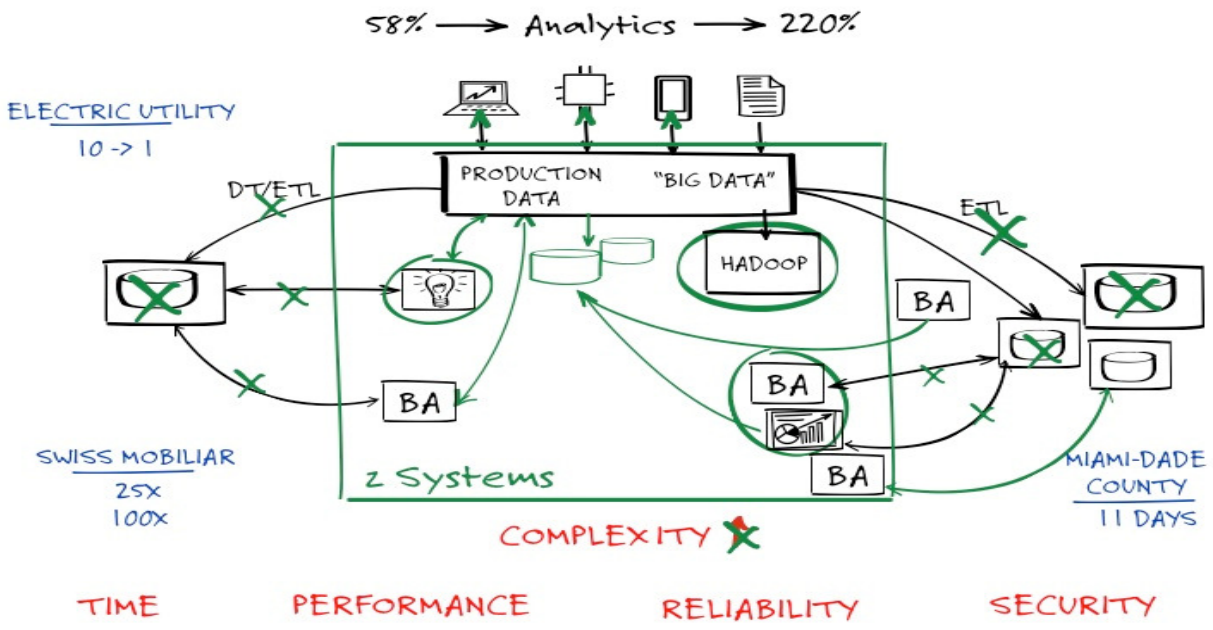
Let me give you a couple of examples of how z System has made a difference.

<WRITE "SWISS MOBILIAR – 25X – 100X">. For Swiss Mobiliar, their z System-based analytics solution enables them to improve customer service by making it possible for them to execute 90 percent of their queries 25 times faster, and 50 percent of them 100 times faster - - Queries that used to take five hours to complete are now processed in just 20 seconds and they can run them any time, day or night, with no interruption to their production systems.

<WRITE "ELECTIRC UTILITY – 10-1">. A large electric utility faced a number of challenges integrating data from more than ten transactional systems and many file-based data sources, including, poor data quality, high latency and high costs. This inflexible, fragile environment resulted in a lack of visibility and directly impacted business results. What they did. They consolidated these data sources onto a single platform (using DB2 for z/OS and the DB2 Analytics Accelerator) enabling enhanced reporting performance, fraud detection and ad-hoc query support.

NOTE TO PRESENTER: Depending on the audience you may want to add the following as part of the discussion on "production data and Big Data". "I would suspect that a portion of your production or transactional data is on z System. A Gartner study indicated that in addition to data coming from social media, and other sources that transactional and log data are also being used in Big Data projects."

9. Z SYSTEMS SUPPORTING AD-HOC-COMPLEX ANALYTICS



For ad-hoc and complex analytics there are a number of advantages that z Systems can provide.

First, you can eliminate the need for a separate platform or environment for a data warehouse. **<DRAW "X" over Big DATA ICON>** You can also look to eliminate separate platforms supporting data marts and consolidate them into z Systems-based data warehouse or data marts. **<DRAW "X" over data icons> <DRAW data icon(s) in z Systems box>** This eliminates the complexity, associated with external ETL tools **<DRAW "X" OVER ETL>** and the potential timeliness, duplicate data, data integrity and security issues or moving data around the infrastructure.

z System**s** can support access to large number of users using any number of tools whether running on z Systems or on another platform. **<DRAW "X" over arrows DRAW arrows to green data icon DRAW arrow from BA box>**

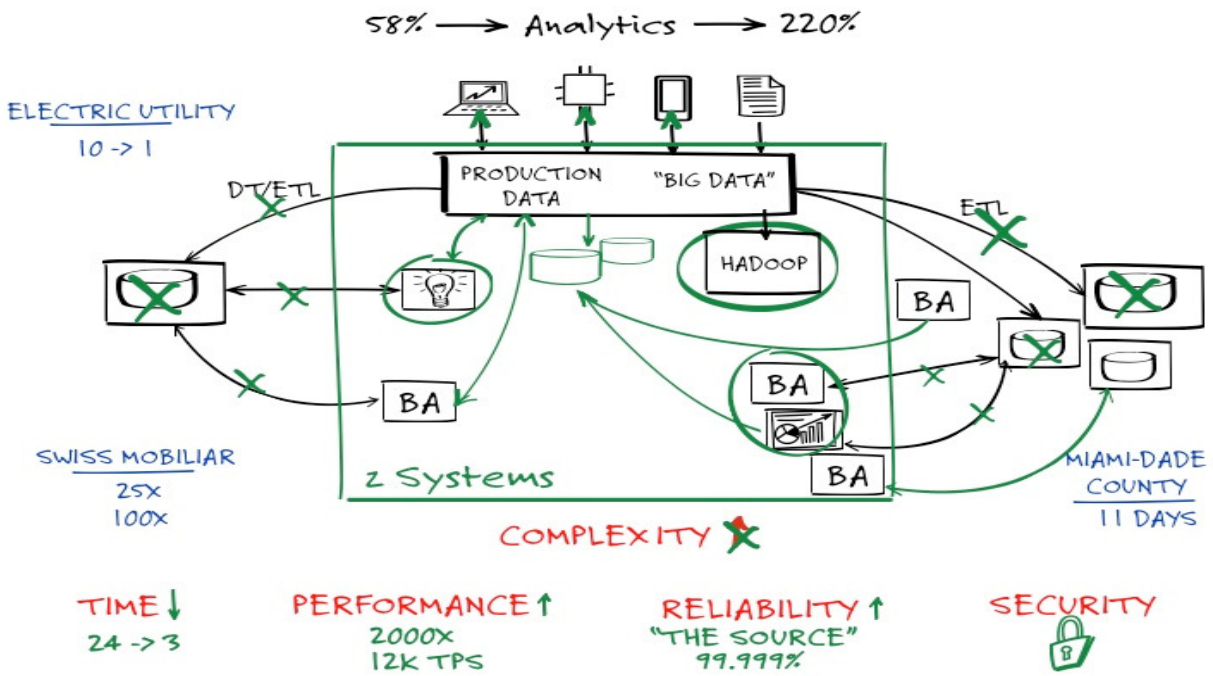
z Systems can also provide real advantages running business intelligence or other analytics and reporting tools. You get the inherent performance and scalability advantages of z Systems. You also can get the simplification advantages by reducing the number of tools in your BA environment. **<DRAW circle>** Finally, with z Systems you can run most leading products and get the benefits of performance and still keep data on other platforms. **<DRAW arrow to data icon>**

Here's another example of what a z Systems empowered analytics environment has meant to a customer.

<WRITE "MIAMI-DADE COUNTY –11 DAYS"> Miami-Dade County saw an opportunity to open up government with a large-scale analytics platform that would allow both internal users and citizens to access a wealth of public information via the web. The county wanted to harness the power of its existing IBM System z platform and their current distributed BA tools to deliver this solution. In 11 days, they went from their distributed model to a z Systems-based analytics implementation. This z System based solution provides 24/7 access to analytics; a more scalable platform to provide the right performance for three million citizens across the county, and has allowed Miami-Dade to reduce their cost of operations.

NOTE TO PRESENTER: Depending on the audience, you may want to consider discussing the **IBM Blue Insight** project.

10. Z SYSTEMS – MEETING THE CHALLENGES



So, how can z Systems help you better deal with some of the challenges we outlined earlier?

First, by improving time to data and the time-to-delivering new analytics value. Consider how much more timely your data will be if you're not moving it between platforms. **<DRAW up arrow>** From a time-to-value perspective, customers have reduced their time to new analytics solutions from 24 weeks (6 months) to 3 weeks by having data and tools resident in one environment. **<WRITE "24 -> 3">**

z Systems can deliver performance to support all your requirements. **<DRAW UP ARROW>** Delivering improved query response times up 2000X faster **<WRITE "2000X">** and real time scoring integrated directly into operational processing delivering up to 12,000 transactions per second. **<WRITE "12K TPS">.**

z Systems can provide a highly reliable and available platform to support business critical analytics. **<DRAW up arrow>** With transaction and analytic data running on the same platform and reducing the number of data marts or data warehouses running on separate platforms you have the opportunity to create **one source of truth** for analysis and reporting. **<WRITE "The Source">** And as analytics drive more real time decision and interactions with customers and systems, having a platform that delivers "transactional level" QoS including 99.999% system availability will become even more critical – and z Systems delivers that today. **<WRITE "99.999%">**

Finally, with z Systems you have an environment that delivers the right level of security for your key data and analytics and is considered the most secure commercially available system. An environment providing you with an increased level of confidence that you're doing everything possible to protect your organization. **<DRAW LOCK>**

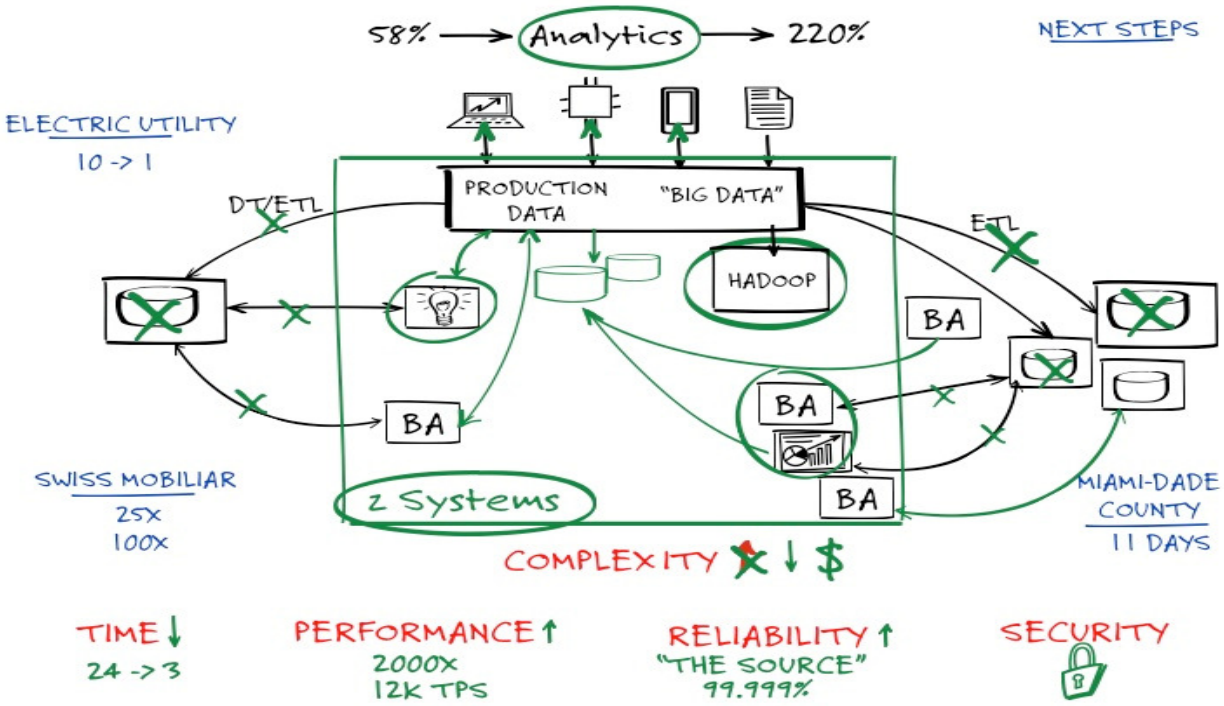
NOTE TO PRESENTER: At this point you might consider making this come alive with one or two customer examples that emphasize key points of interest for the audience.

Here are two additional customer stories that outline what has z Systems meant to them.

Petrol, a principal strategic supplier of oil and other energy products, wanted to use historical and transactional data from its retail stores to improve sales, but their analytics environment couldn't manage the required query volumes or complexity. IBM worked with Petrol to implement a z System environment (DB2 Accelerator) to help them do something they could never do before, increase retail sales through reduced analytic query response times that were significantly faster. The store employees now have timely access to product sales data to more effectively suggest-sell at the point of sale.

For **Banca Carige,** they are doing things they could never do before, eliminating complexity and increasing flexibility while delivering critical analytic information orders-of-magnitude faster. They are now able to give 1,000 business users fast access to vital insights – informing the development of new products, services and strategies to grow the business. Their z System-based analytics solution provides them with greater reliability, availability and built-in security.

11. RECAP AND NEXT STEPS – FOR USE WITH ANIMATED POWERPOINT



<DRAW circle around analytics> I hope I've given you a perspective on why and how z Systems can better support your data and analytics activities today but more importantly how it can help you to deal with future requirements.

<DRAW circle around z Systems> The key is that with z Systems you don't need to introduce an entirely new environment. You can start with the tools you have today and take advantage of z Systems to address your most pressing challenges. Then move on from there.

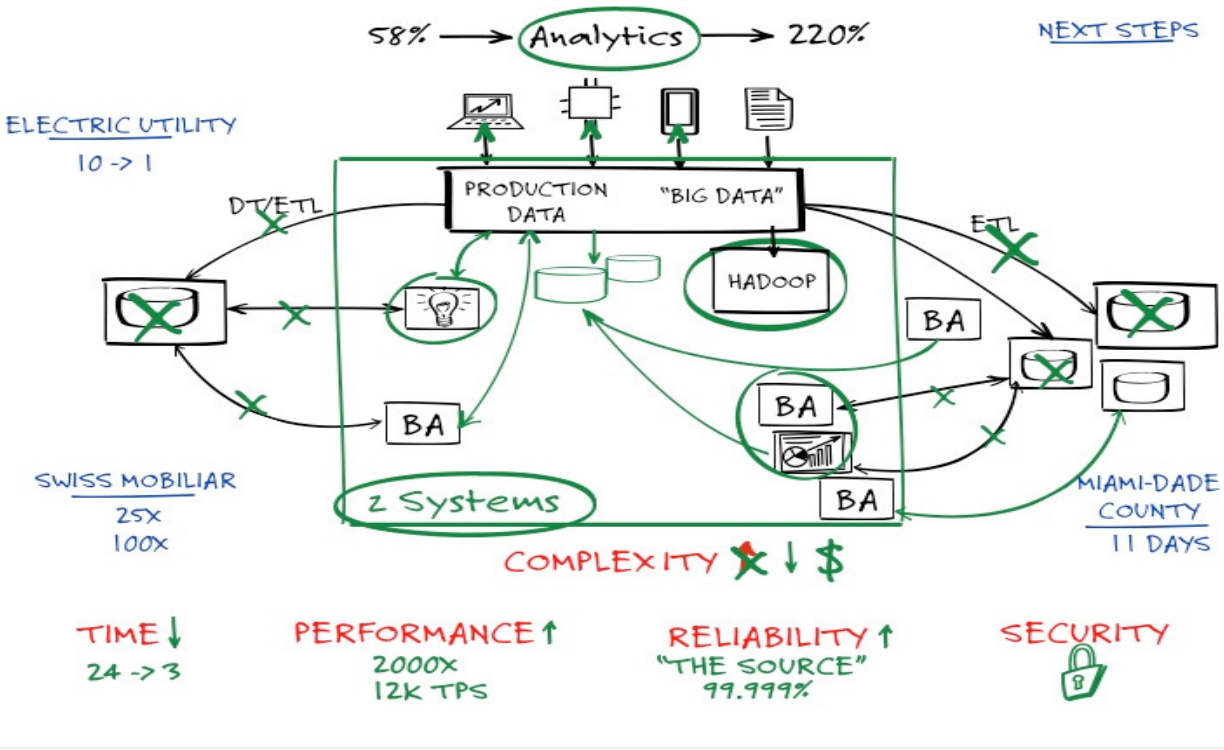
Helping you to reduce the overall complexity and cost of your environment by… **<DRAW down arrow WRITE "$">**

<CLICK AND THERE WILL BE DISSOLVES OF "X'S" AND EXTERNAL SOURCES> … consolidating data marts or analytic tools – dealing with data and analytic processing performance issues – addressing Big Data opportunities or ensuring you have a reliable and secure environment for your business critical analytics.

Based on our discussion, as a Next Step **<WRITE "Next Steps">** I 'd like to suggest that we bring together other members of your team to look at your requirements and identify a specific analytics project where we can demonstrate how z Systems can significantly enhance your ability to meet business needs as well as reduce complexity and its associated costs.

NOTE TO PRESENTER: You may identify other Next Steps in the course of your discussion. The key is to WRITE them down and get agreement from the audience on how to move forward.

12. RECAP AND NEXT STEPS – WHEN WRITING



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