

# Bookings, Billings, and Backlog: Managing Operational Performance for Financial Success

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Introduction .....	3
Understanding the BBB Imperative .....	3
BBB and Your Company.....	3
The Impact—and Challenges—of BBB Reporting and Analysis.....	4
Approaches to BBB—and Why They Fail .....	4
Manually Processed Spreadsheets .....	4
Transaction System Reporting.....	5
Applied BI Technologies.....	5
How Data Quality Affects BBB Information .....	5
Best Practices for Enhancing BBB Reporting and Analysis .....	6
Standardize Processes.....	6
Gain Company Support.....	7
Focus on Data Quality .....	7
Deploy Technology Wisely.....	8
Leverage Transaction Systems.....	8
Achieving ROI from Your BBB Solution .....	9
Deploying Your BBB Solution.....	10
Avoid Common Excuses.....	11
Start with Manageable Goals.....	11
A BBB Solution from Oracle .....	11
BBB in Action.....	12
Conclusion.....	13

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## INTRODUCTION

Bookings, billings, and backlog (BBB) information is the lifeblood of any organization that manufactures and ships products. But BBB information can be difficult to gather, analyze, and report. Using spreadsheets is a cumbersome, error-prone approach that doesn't provide flexible analytical views of performance, and transaction systems that collect and store data offer limited reporting capabilities. To compound this problem, many organizations must gather sales data from multiple distributors or sales channels.

Manufacturers can now use an emerging set of best practices to enhance their BBB reporting. These best practices focus on improving the way data is collected, increasing executive support for projects, ensuring data quality, and applying technology wisely. Business intelligence (BI) technology can promise a significant return on investment (ROI) to companies that desire to take a closer look at BBB performance. By starting small with a phased approach to deployment, companies can achieve consistent results without monopolizing the technology budget.

## UNDERSTANDING THE BBB IMPERATIVE

### BBB and Your Company

Which of your products produces the most revenue? What is your total billed amount for products this period compared to past periods? Is your backlog sufficient to meet quarterly targets? Are you meeting your promise dates for shipments to customers?

If your company produces and ships products, you must closely monitor BBB information. But if you lack a comprehensive view of BBB, you will be unable to see anything more than a snapshot of your order activity, and decision-making across your enterprise will suffer.

A comprehensive view of BBB information includes the following:

- **Bookings performance information** lets you count new orders in the current period, identify top-selling products, and monitor important trends. By tracking new orders and cancellations side by side—and by trending this

**If your company produces and ships products, you must have a comprehensive view of BBB information and the ability to monitor that information in real time.**

information over time—you can form an accurate picture of the direction in which your business is heading.

- **Billings performance information** lets you evaluate your billing and delivery cycles, uncovering data about shipping performance and product returns in the process. For most companies, billings information translates directly to revenue. In our ultracompetitive era, it is critical to understand the margins associated with revenue.
- **Backlog performance information** lets you examine potential revenue by counting all the orders that have been received but not shipped. If you assume that you will ship out all the orders in your backlog, you can then predict how much revenue those products will generate over the upcoming weeks or months.

### **The Impact—and Challenges—of BBB Reporting and Analysis**

Extracting the right BBB information from transaction data is often a much more difficult task than it seems. Your general ledger closing process might produce financial statements that outline your revenue, expenses, and margins for a particular period, but this high-level “report card” doesn’t explain why things are the way they are. Without all the necessary datasources and the right tools to dig down deeper, you might never know why one of your customers bought less than you expected or which regional factors are affecting your overall sales numbers.

When you establish a BBB strategy and support it with the right technology, you can organize all of your data into a high-level summary and then drill down into the details to understand why you have arrived at these results. Instead of gathering simple statistics on sales and margins, you see results on the individual customer level or in a particular geography. From there, you can begin to make inferences about how individual product lines are performing. BI technology provides the ability to answer questions about *why* things occurred, rather than provide a simple report card of *what* historical results have been.

### **APPROACHES TO BBB—AND WHY THEY FAIL**

Aware of the immense value that BBB information can add to the decision-making process, companies typically try to gather this information via spreadsheets, the reporting capabilities of their transaction systems, or BI technology. These approaches produce varying results.

#### **Manually Processed Spreadsheets**

To gather and analyze detailed information for BBB reporting, most companies extract information from data entry systems and enter it into spreadsheets, hoping to build the much-needed “big picture.”

**Why did sales performance lag in northern Europe? Why did a particular product sell well in Kentucky but not in Tennessee? If you don’t have the right BBB data, you might never know.**

**Spreadsheet reporting lacks drilldown analysis and is a time-consuming, error-prone process.**

There are two major problems with this approach. First, putting all of the necessary data in a spreadsheet can be a difficult, tedious, and error-prone process. Second, even if you succeed in establishing a summary view of performance in a spreadsheet, you will likely have to settle for just a few snapshots of performance. Spreadsheets do provide more-detailed information than the typical financial statement from the general ledger, but they don't allow you to drill down and analyze data without extensive manual effort.

**Transaction systems do not easily yield the summary data necessary for BBB analysis.**

### **Transaction System Reporting**

Transaction systems typically provide detailed reports—for example, complete lists of all the orders your company has shipped. However, they don't provide summary reporting, nor do they allow you to perform sophisticated analysis of your results. Using batch type reports in hard copy form, you can identify problems but not their causes. And, among all this detail, it is nearly impossible to see your company's performance at a high level.

Why is it so difficult to get meaningful information from transaction systems? Because these systems store data in multiple tables that are connected by a complex series of links. To retrieve the data correctly, you must understand these tables and links—a difficult task even if you have an information technology background.

### **Applied BI Technologies**

Some vendors offer BI technologies that can address the BBB challenge. For example, online analytical processing tools offer the ability to organize data into an analytical model that helps you understand business issues using high-level metrics (called key performance indicators) and drill into lower-level metrics and details to understand root cause issues or opportunities. Mature BI products are highly scalable, have distributed architectures, and accept data from multiple sources.

**In general, a BI approach is the best one to address all BBB issues.**

What is the importance of pulling revenue information from multiple sources into one view? When you can see forecast data in the same system as your BBB data, you can gauge up-to-date performance at any time of year. For example, if you are 6 weeks into a 13-week quarter, you'll be able to see what you have billed quarter to date, check the backlog for products that will ship within the current quarter, and predict expected results for the quarter. With this information, you can compare projected quarterly results with your original forecast.

In general, a BI approach is the best one to address all BBB issues. The more-widely adopted BI technologies offer the depth and breadth of technical capabilities to deliver needed BBB information and insights in a manner appropriate for all business stakeholders.

### **HOW DATA QUALITY AFFECTS BBB INFORMATION**

Of course, if you can't get quality data from your sales channels, you'll never be able to populate your BBB reports with reliable information. Manufacturers that sell through distributors often struggle to gather timely, accurate sales data. But

**Whether you sell through direct channels, distributors, or both, data quality is critical to the BBB strategy.**

even manufacturers that sell through traditional channels must pay close attention to data quality before they can begin to enhance their BBB reporting.

Selling products through distributors can make it difficult to gather and analyze reliable BBB information. Whereas most manufacturers simply recognize revenue at the time they ship items to a customer, companies that sell through distributors cannot recognize revenue until the distributor sells a product to the end customer and then reports this information.

Manufacturers and distributors typically form agreements that require the distributors to provide sales information on a weekly or monthly basis, showing exactly what was sold to the end customer. To form an accurate view of revenue, manufacturers rely on data from possibly dozens of distributors. But not every distributor will use the same customer names, location identifiers, and product numbers. Adding to the complexity, some distributors submit data through electronic data interchange transmittal, whereas others e-mail spreadsheets. As a result, manufacturers must perform complex mapping exercises to compile accurate revenue data.

Even manufacturers that do not sell through distributors face data quality challenges because they must gather revenue information from across conventional sales channels, such as original equipment manufacturers and direct sales. When they ship to a customer, they can generally recognize the revenue right away. However, with quarterly results falling under greater scrutiny, publicly traded companies often want up-to-date information on revenues as the end of a quarter approaches, so that they can try to boost performance or issue earnings warnings. Spreadsheet-intensive reporting processes do little to enable this timely look across multiple sales channels.

## **BEST PRACTICES FOR ENHANCING BBB REPORTING AND ANALYSIS**

**Leveraging best practices significantly enhances the outcome of BBB initiatives.**

To improve upon the current approaches to basic BBB reporting, a set of best practices has emerged. Manufacturers that adopt these practices can assimilate data into an intuitive business model, see summaries of overall performance, look at trends and compare performance to prior periods, and drill down into details to identify root causes. These best practices focus on helping companies master processes, data, and software technology.

### **Standardize Processes**

The companies that have perfected BBB reporting and analysis are those that pay the most attention to how they pull information from their source systems. For example, in a product hierarchy, most companies assign part numbers that roll up to a product line, product family, and business unit total. These hierarchies are usually available within source systems, but many companies don't pay attention to ensuring the hierarchies are correct. As a result, it can be difficult to organize data into meaningful data models for an analytical tool.

The solution to this problem is to establish a reliable data mart where you can stage data in a dimensional model, making it easier to feed data into the analytical solution. Within the data mart, you can organize data in exactly the way management wants to see it summarized. Automated processes pull data from your source systems and feed the data warehouse nightly, saving you time and giving you a more-timely picture of company performance.

### **Gain Company Support**

Like most high-profile enterprise projects, BBB initiatives require significant executive support. And because many executives use BBB information, they have a compelling reason to be interested.

In companies that use spreadsheets to report on BBB information, many business users will pull information from source systems, clean up the data in spreadsheets, and then use the spreadsheets to report results to their management. As long as these undisciplined processes continue, there will be an unreliable connection between source systems and perceived results. Conflicts will arise between colleagues in the key functional groups, such as finance and operations, about whose numbers are correct. Even more disturbing is the lost knowledge of how unique spreadsheets were designed and the data maintained when employees depart the organization, leaving others to interpret and manipulate results in new ways.

You should encourage executive sponsorship and cross-functional alignment when scoping BBB reporting and analysis initiatives to align all key stakeholders around consistent information definitions and calculations, and data management and extraction policies. Doing so in advance will reduce conflicts, rework, and time and effort.

### **Focus on Data Quality**

How can manufacturers make sure the data in their source systems is correct? As previously discussed, much of the challenge has to do with managing hierarchies consistently. Some companies will count a product in different product lines depending on the type of transaction. Their data entry systems lack the integrity features to ensure a one-to-one relationship between a product and its parent—or else, they use manual processes that are prone to inconsistency. As a result, they are constantly left wondering about the correct way to record a transaction.

Much of the information that goes into a BBB reporting and analysis system is derived from the order management system. If systems don't have integrity built in, accuracy lies in the hands of an order entry clerk who isn't trained to make judgment calls. For example, a company that wants to capture market information associated with orders and billing might not have a list of standard markets built into its order entry system. As a result, its order entry clerks could record the aerospace market as "aerospace" on one record, "aerospace and defense" on another record, and "A&D" on a third, making it impossible to map it to the

**Executive sponsorship and cross-functional alignment among key stakeholders help ensure consistent processes and business definitions.**

correct markets. The same information will thus be presented in multiple ways—defeating the whole purpose of trying to gather it.

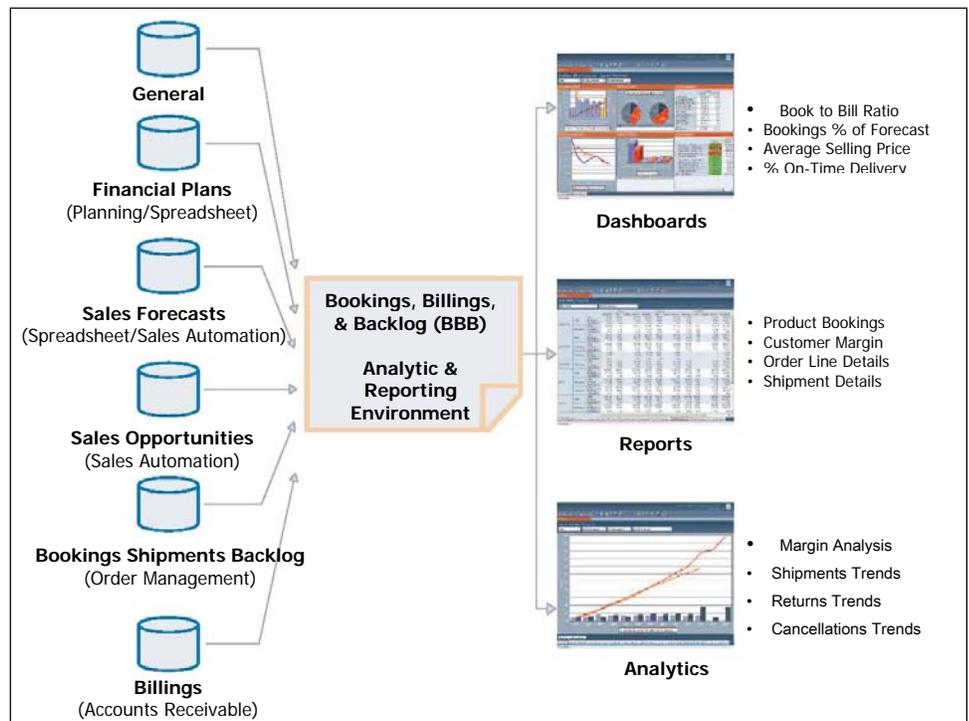
### Deploy Technology Wisely

BBB best practices also address the use of software technology. How can you best deploy transaction systems? And how can you apply BI to meet your needs?

### Leverage Transaction Systems

Although order management data is critical to delivering BBB information, not all of the potential data needed is captured in the order management system. Data can come from the general ledger, sales automation systems, spreadsheets, and even accounts receivable. Figure 1 shows the datatypes and systems that can feed the BBB data model for reporting and analysis.

**Transaction systems contain critical BBB information that must be extracted and captured in a data warehouse for analysis and reporting.**



**Figure 1: Common bookings, billings, and backlog reporting and analysis architecture.**

Data system consideration is critical in getting the most out of a BBB solution. If your management wants to see data split by markets, you will need to establish processes to ensure that data will be captured in ways that enable these views. There must be rules in place for figuring out the correct market classification for each piece of data. Will it be based on customer, or on product? Will it vary for different customers and products? These are decisions you must make based on the information that management thinks is ultimately the most important. Go back to

the beginning—to the point of data entry—and ask, “Where and how will we capture the information that is critical to delivering timely, relevant, accurate BBB reports and analytics?”

### **Apply BI—Dashboards, Reports, and Analytics**

One of the greatest benefits of BI tools is the breadth of capabilities they provide. As Figure 1 shows, performance indicator dashboards, detailed reports, and time-based analytics provide a great deal of insight into the BBB cycle. Multidimensional analysis is crucial for diagnosis of problems, or conversely, for exceptional performance situations. For example, in the most recent quarter, you might have expected a gross margin of 40 percent, but only achieved 35 percent.

**BI tools enable multidimensional analysis through drilldown functionality, which allows you to quickly identify root causes and take appropriate actions.**

Multidimensional analysis enables you to drill down into different dimensions of data so that you can begin to understand the causes of this shortfall. You might be able to isolate severely underperforming product lines, and then analyze results by customer. Which customers bought these product lines? Was it a single customer’s budget cutbacks that caused the problem or cutbacks across a group of customers?

You can also drill down by geographic dimension. Was there a depressed market in one of your regions? Did natural disasters or political conditions hamper sales? With multidimensional analysis, you can look past the simple report card view to determine exactly what happened and why. You can identify the root causes of performance—positive and negative.

Using powerful drilldown capabilities in leading BI suites, you can choose the level of granularity you want. In fact, some companies choose to drill down to individual orders to diagnose root cause problems. Others might monitor members of their sales force to determine whether they are providing inappropriately heavy discounts in an attempt to improve their sales numbers—especially at the end of a quarter. By identifying these situations as they occur, companies can protect profit margins.

Analytics enable you to perform trend analysis. You can compare your performance to previous periods and monitor your company’s progress over time. If your business is seasonal, you can compare your performance to the same quarter from the past few years. Many companies also choose to create dashboards that show quarter-over-quarter performance, so that they can see how they are doing overall.

## **ACHIEVING ROI FROM YOUR BBB SOLUTION**

In the current age of cost cutting, executives expect virtually every technology investment to deliver a rapid, measurable ROI. Although it can be difficult to predict a precise ROI on BBB technology, there are many areas in which the technology can enable significant improvements.

Suppose a manufacturer negotiates annual contracts with large global customers. Because these customers know their importance to the manufacturer’s bottom line, they expect—and receive—preferred pricing. At the beginning of each year, the manufacturer negotiates prices with these customers based on assumptions of

**With a BBB platform in place, manufacturers can analyze distributor performance and apply optimal discounts and prices to save thousands of dollars.**

volume. The manufacturer gains assurance of a certain amount of revenue, and in return, the customer receives significant discounts. But each year, the manufacturer goes into the negotiating sessions lacking information about how much the customer actually purchased against the previous year's contract, and therefore has no way of determining whether the customer delivered on its promise. Each year, the customer asks for a better deal, and the manufacturer feels pressure to comply.

With BI technology in place, the manufacturer can analyze the actual volume and margins on each of its customer relationships from the previous year. Using this information, it can determine which customers did not meet the terms of their contracts, and address these shortfalls in negotiations. The manufacturer can stand firm on its pricing, encourage compliance by its leading customers, and potentially save thousands—even millions of dollars.

Suppose another manufacturer sells its products through distributors. As they sell products, these distributors are allowed to earn a predetermined margin by marking up prices. The manufacturer uses BI technology to track distributor performance and identify any distributors that are using excessive markups to earn more money. By preventing these markups, the company ensures optimal pricing, increases the chances that it will reach its sales targets, and protects its corporate image as an affordable vendor.

Consider also how publicly traded manufacturers can use BI systems to scrutinize their earnings as the end of a quarter approaches. If results are lagging, a manufacturer might be able to examine its backlog, determine how many products are scheduled to ship early next quarter, and accelerate the shipping process to record more of these products as earnings on the current quarter. If not, the manufacturer can issue earnings guidance, minimizing the damage to its credibility.

If you had this BBB information at your fingertips, what kinds of decisions could you make to protect your margins, boost sales, and meet quarterly targets?

## **DEPLOYING YOUR BBB SOLUTION**

Once you've decided to implement BI technology to address the BBB challenge, where do you start? Before you undertake any deployment, determine what result you want to achieve. A surprising number of companies will dive into technical details and prices before they have identified their most urgent needs.

The best way to start is to ask: If money were no object, what would our ideal system look like? What functionality would it have? What elements would it include? What information would our decision-makers be able to access within seconds? Form a complete blueprint of this ideal system.

Next, consider the realities of IT budgets and technical resources. Then, look at your blueprint and pick out the segments of your ideal system that you think would deliver the highest impact with the lowest risk. Build those pieces one by one as time and money permit, with the idea that every piece must fit into the master blueprint. Over time, you will build your ideal system without wasting budget.

## **Avoid Common Excuses**

Of course, many companies put off forming a blueprint and implementing those first pieces of technology because they believe their data and hierarchies aren't clean enough. As soon as they fix these problems, they say, they will concentrate on implementing powerful new technology.

What these companies don't realize is that no time is too soon. You don't have the luxury of not reporting on BBB information. Continuing to produce spreadsheets riddled with discrepancies and outright errors only compounds the current confusion, wastes valuable time, and misleads management into thinking that they are making decisions based on clean, reliable data. Instead of making excuses, these companies should refine their current processes, build them into a business model that makes sense, and align the technology that can support this model. BI technology will actually expose data issues, making it easier to fix inherent problems. On the other hand, manually manipulated spreadsheets only camouflage problems with the data.

## **Start with Manageable Goals**

Many data warehouse projects fail because they are too ambitious, and because they take too long to show any real results. By starting your BBB project with a phased approach, you can incrementally build familiarity with, and acceptance of, the tools among their most common users. Meanwhile, you will also create excitement at the management level because executives will be able to access the information needed to make business decisions much more easily. And don't forget that enthusiastic executives typically offer ongoing funding and support.

But what is manageable? Consider automating the process of extracting source data and putting it into a database. Perhaps there is other information that you want to include from different sources, but you can leave that step for the second phase of implementation. For example, a company that requires order management and general ledger information might also want to pull in sales opportunity data from its sales force automation system. It should begin by implementing BBB analytical functionality from the required sources and making sure its employees get used to using it. Opportunities information can be incorporated in the next phase. By deploying the fundamentals first and scaling later, the company progresses toward its ideal technology blueprint without incurring risk or driving up costs.

## **A BBB SOLUTION FROM ORACLE**

To help enterprises realize the many benefits of accurate BBB reporting, Oracle created the Hyperion Bookings, Billings, and Backlog solution to deliver access to daily BBB information and on-demand visibility into the performance of the business. Leveraging BI and data warehouse components from Oracle's enterprise performance management system, the Hyperion Bookings, Billings, and Backlog solution automates data extraction from enterprise resource planning and other systems to eliminate the time-consuming, tedious task of data collection and static

**Many BBB projects fail because they are too ambitious, and because they take too long to show any real results. Adopt a phased implementation to incrementally build support and adoption.**

report creation. Through personalized dashboards, functional, geographic, and business unit executives can view the same set of data to communicate plans and collaborate on the execution of company initiatives (see Figure 2).



Figure 2: BBB performance dashboards speed up operational decisions surrounding shipments, backlog, and inventory by automating performance indicators and insights.

### BBB IN ACTION

A major global manufacturer and marketer of computer, gaming, entertainment, and mobile phone equipment recently began to look for ways to succeed in a fiercely competitive environment. The company must keep abreast of accelerating customer demand while staying on top of a complex, fast-moving global business. To that end, its finance department set out to find a solution that would enable it to deliver on-demand visibility into the performance of the business.

Much of the company's critical information was locked away in its forecast, order management, and data warehouse systems, unavailable to operating executives and decision-makers who wanted to use it to monitor performance and make better decisions. As a result, the company's BBB reports were difficult and time intensive to produce. The company selected a leading BI technology because of its ease of use and extensive dashboard and analytics capabilities. With the help of an implementation partner, the company deployed an advanced analytics and reporting technology platform for BBB.

Designed to automatically extract key information from a data warehouse, the BBB solution provides standard reports with drilldown capability, as well as the ability for users to create unique queries to meet their specific business needs. Within two months of prototyping this application, the company produced its first automated BBB dashboard, which features current, detailed performance information about sales by customer, region, product, and channel over various time periods; the

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company's standard margin to date; and an updated outlook for the quarter. In addition, the company can “slice and dice” revenue and margin data any way it wants and ask questions about performance for the quarter as it progresses.

With its new, improved BBB solution in place, the company has freed its finance team from spending long hours on transactions and reporting activities to focus on more value-added, strategic initiatives. It has also improved data integrity and confidence throughout the company. The finance team now has more time to focus on ensuring appropriate levels of data integrity in the company's data warehouse. Meanwhile, the operations team and entire management team has noticed the difference. Because executives can immediately see variances themselves, they no longer have to wait for finance to tell them what their numbers are or to point out variances—which has made them much more proactive and accountable.

Because of the overwhelming acceptance of the improved way BBB reporting and analysis is performed, the company now holds regular “refresh” meetings attended by every vice president in the company. During these meetings, each executive presents an up-to-the-minute analysis of what is happening in their area, and of upcoming goals to accomplish. No longer slaves to mountains of spreadsheets and time-consuming manual processes, the key business stakeholders and their teams can now more-effectively monitor and align their activities with corporate targets. In short, the company sets priorities and accurately monitors and improves performance—signs of a performance-accountable organization.

## **CONCLUSION**

As you seek to begin addressing your BBB reporting and analysis needs with BI technology, remember these key points:

- By going beyond a snapshot view of your bookings, revenue, and margin, you are taking a critical step toward mastering BBB.
- Small, incremental improvements are far better than sticking with the status quo of spreadsheets and manual processes.
- Don't spend time or money on technology that doesn't advance achieving your ideal BBB technology blueprint.
- Executive-level support and involvement is critical. Rally support by showing executives what is possible with an insightful BBB solution. Win their trust by delivering on time and on budget at every stage of implementation.
- Fronting your BBB solution with the familiar Microsoft Excel interface might help users get up to speed quickly and can help ensure rapid adoption across the organization. Make sure that your solution has the scalability to grow with your organization and has the ability to pull information from a variety of systems and sources.

**Reduce reliance on manual spreadsheets and quickly provide business users with the critical information that will allow them to migrate from data collection to decision optimization.**



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