IBM SolutionsConnect 2014

A New Era of Smart

March 2014 | Philippines

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Unlocking Business Insights: Transform Business Management Processes

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Smarter Planet Solutions

New Market Dynamics force Enterprises to Transform

Emerging Market Growth
Emerging markets, led by China fuels 2.6x the growth rate of developed markets, contributing over 50% of all new growth[2]

Cloud Computing
2011 spending on private cloud services is $13B....growth over next four years will exceed 26% annual growth[2]

Security
Security remains robust for supporting regulatory and policy compliance needs[2]

Mobile Enterprise
By 2013, 80% of businesses will support a workforce using tablets[1]

CFOs' Opportunity:
Be the **agent of innovation & growth** as the **trusted advisor** who **leads the transformation** for your enterprise

Compliance
The cost of non-compliance—fines, legal fees, and disrupted services—was almost 3x the cost of compliance[3]

Big Data
'Digital universe' will grow to 1.8ZB in 2011, up 47% from 2010, and rocketing toward over 7ZB by 2015[2]

Social Business
By 2015, 40% of large enterprises will have a corporate "Facebook," for circulating both business and personal data[1]

Next-generation analytics
80% data growth is unstructured[1]

Organizations continue to struggle with Structural Complexity and Delivering Business Insight

Challenges

Nearly 40% of enterprises produce financial metrics manually (50% manually produce operational metrics)

Finance continues to spend **nearly 50%** of time on transactional activities

Over 25% lack the necessary common data definition and processes

**Over 35%** lack a common reporting platform and 50% lack a common planning platform

"...**fewer than 15%** of CFOs are **confident** they get helpful information for making **decisions about the future**..."

—CFO Executive Board, March 2012

Analytics has evolved from Business Initiative to Business Imperative

Percentage of respondents who cited a competitive advantage from the use of information and analytics[1,2]
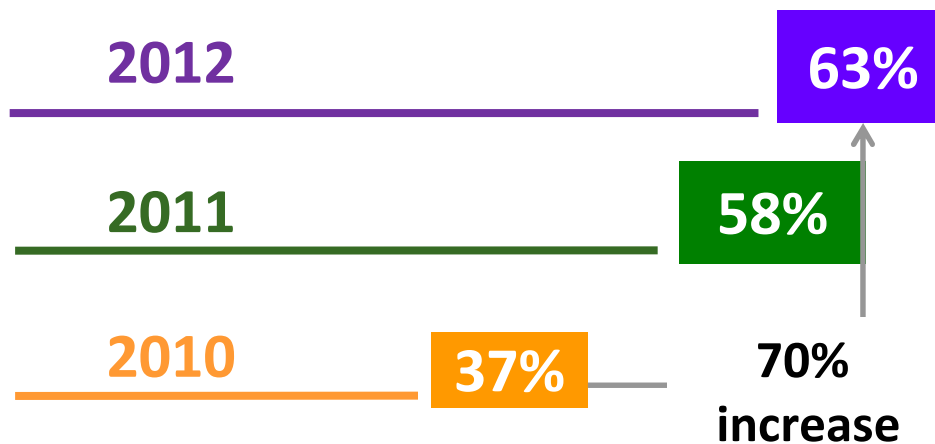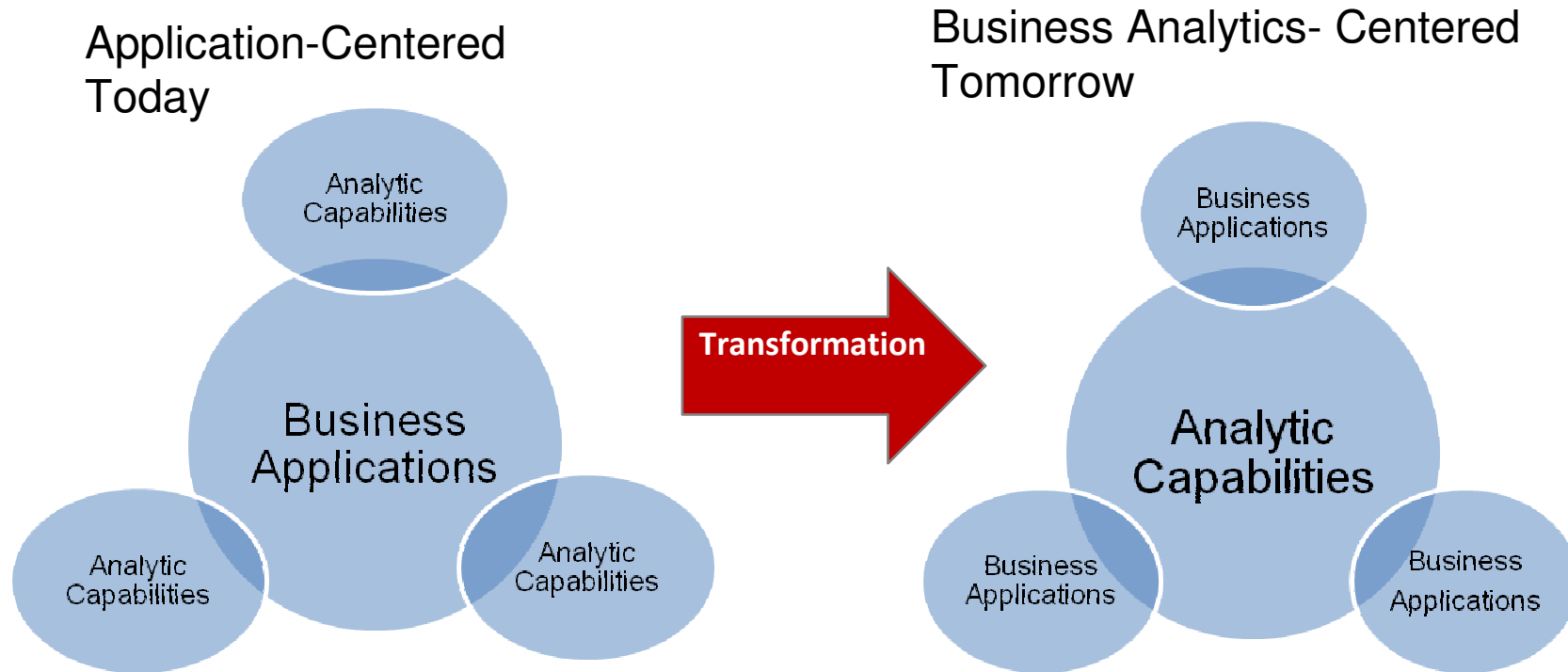
Likelihood of organizations competing on analytics to outperform their peers[2]

2012 — **63%**

2011 — **58%**

2010 — **37%**

70% increase

3.6x

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Moving to a New Paradigm

Application-Centered
Today

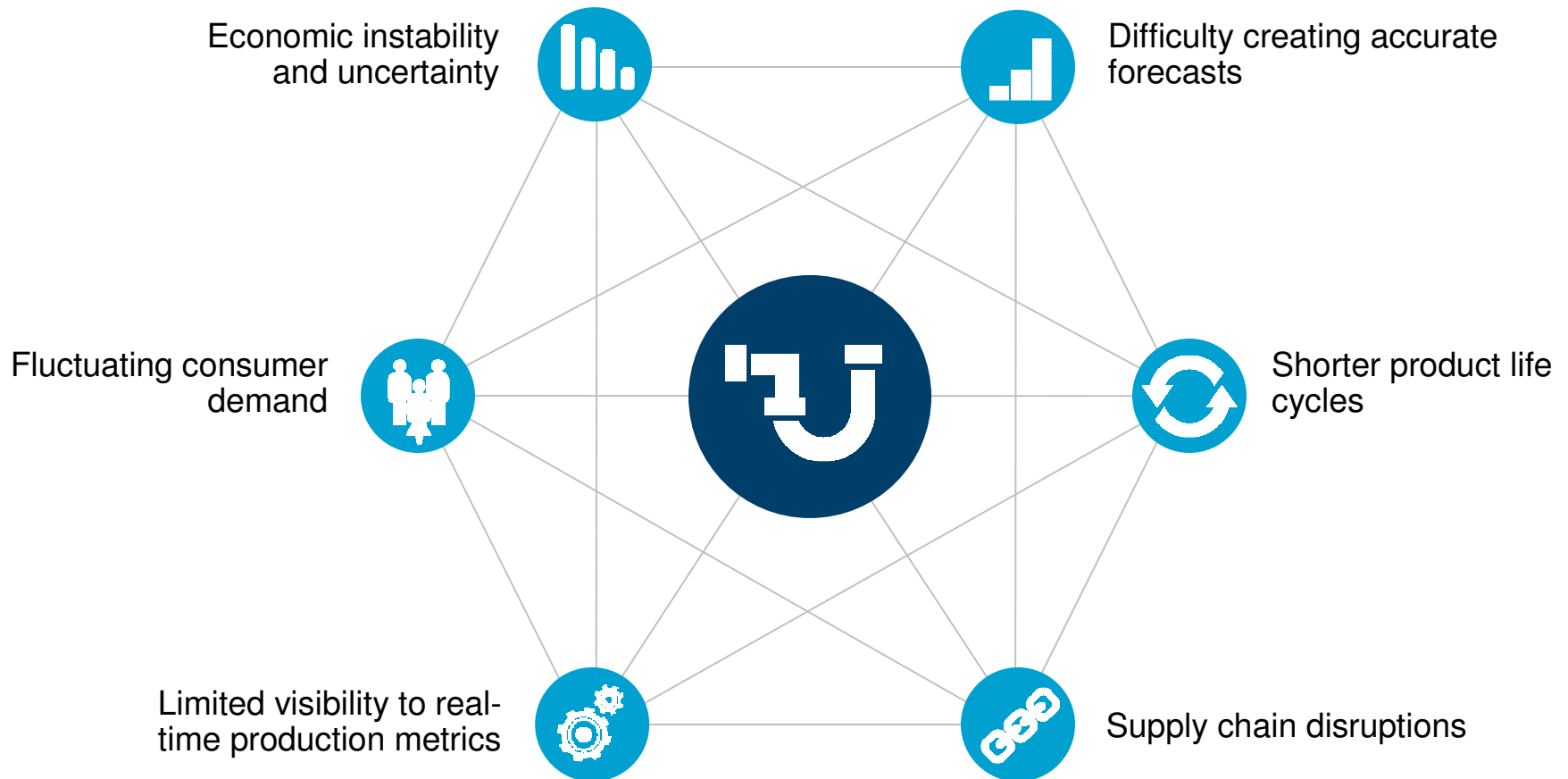Business Analytics- Centered
Tomorrow

Transformation

Source: Gartner, 2012

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Organizations must Adapt in the face of Global Economic Challenges and Changing Customer Demand

Economic instability and uncertainty

Difficulty creating accurate forecasts

Fluctuating consumer demand

Shorter product life cycles

Limited visibility to real-time production metrics

Supply chain disruptions

In spite of these challenges, Analytics is helping Manufacturing Organizations turn Threats into Opportunities

Intelligent Supply Chain	Customer Demand	Cost to produce
Using advanced analytics gives the real time information and makes it available to the company which resulted in annual net benefit of nearly	Using predictive analytics to help to manage inventory more efficiently, significantly reducing the need to carry surplus stock, resulting in a total cost saving in one year	Using analytics delivers a better and more cost-efficient product and the total investment was paid for and in the black in
US$ 1M	**£31,1 M**	**6 months**

These Market and Technology Factors are driving Transformation in Business Process Optimization

Traditional View	Differentiated View
Product-Centric	Consumer & Customer-Centric
Push-Based	Demand-Driven
Ladder Planning	Cluster Planning to Tailored Assortments
Disconnected Channels	Integrated Cross Channel
Market Promotions	Personalized Promotions
Silo'd Visibility	Enterprise Visibility
Hindsight-based Decisions	Optimized Decisions

More Organizations are turning to Analytics to deliver Smarter Outcomes

What if …

Customer service

… could offer personalized price promotions to different customer segments in real time?

Sales management

… could more accurately forecast demand, leading to better inventory management?

Executive team

… could make better business decisions using accurate data across all time horizons: past, present and future?
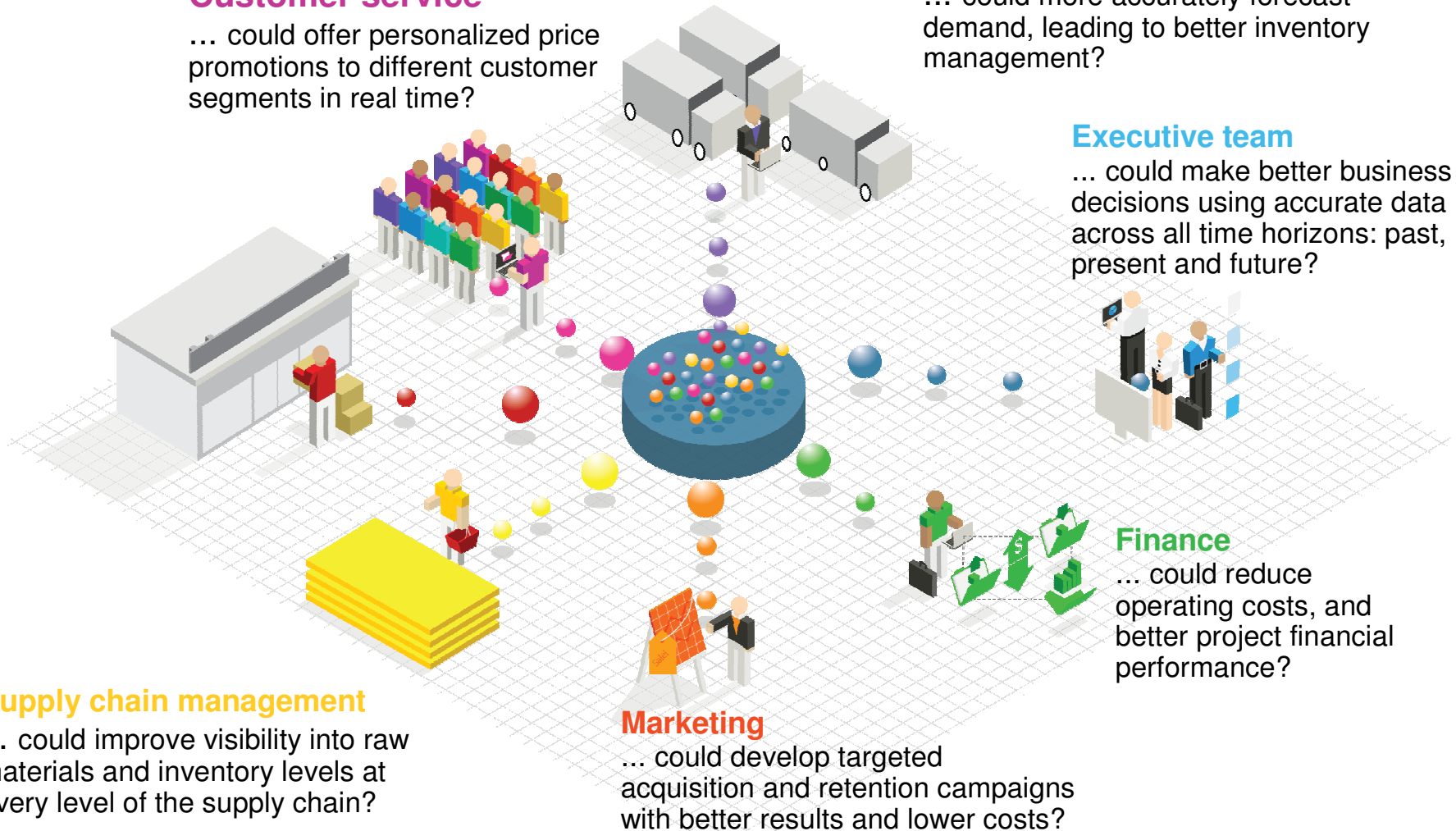
Finance

… could reduce operating costs, and better project financial performance?

**Supply chain management**

… could improve visibility into raw materials and inventory levels at every level of the supply chain?

Marketing

… could develop targeted acquisition and retention campaigns with better results and lower costs?

Transforming Business Process with Deeper Insights

Optimize Global Operations

Enhance Supply Chain Planning & Production Efficiency
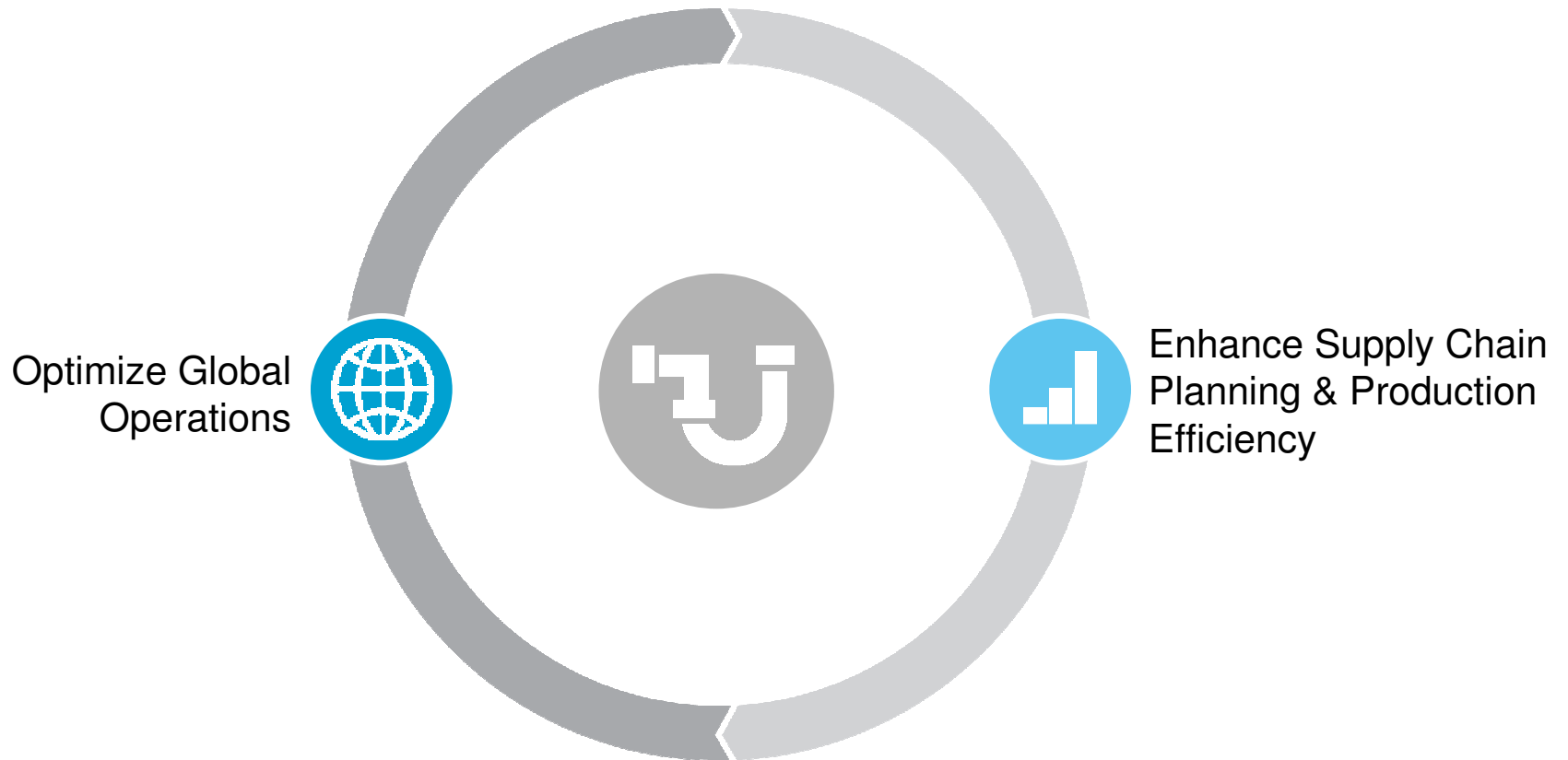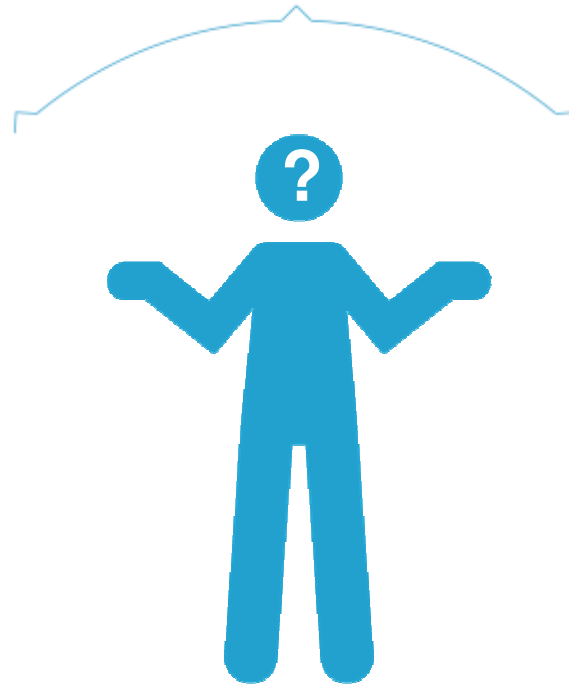
Focus on Optimizing Global Operations

Are my product plans aligned to the needs of customers?

How can I act on the vast amount of commentary from our blogs, forums, social media?

If I build a new product, what will be the demand for it?

How can I have better visibility of my Supply Chain process?

How can better financial and demand forecasting improve the performance of my business?

What if I could monitor and act upon the vast amount of data generated in the sales cycle?
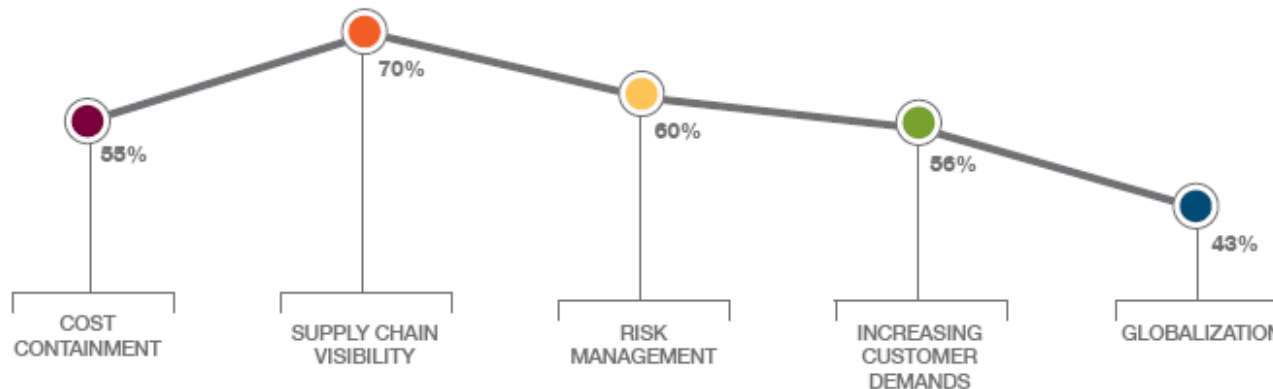
What intervention is required to meet sales and production goals?

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Key Performance Management Drivers

SUPPLY CHAIN LEADERS WRESTLE WITH FIVE MAJOR CHALLENGES

Percentage who report this challenge impacts their supply chains to a significant or very significant extent.
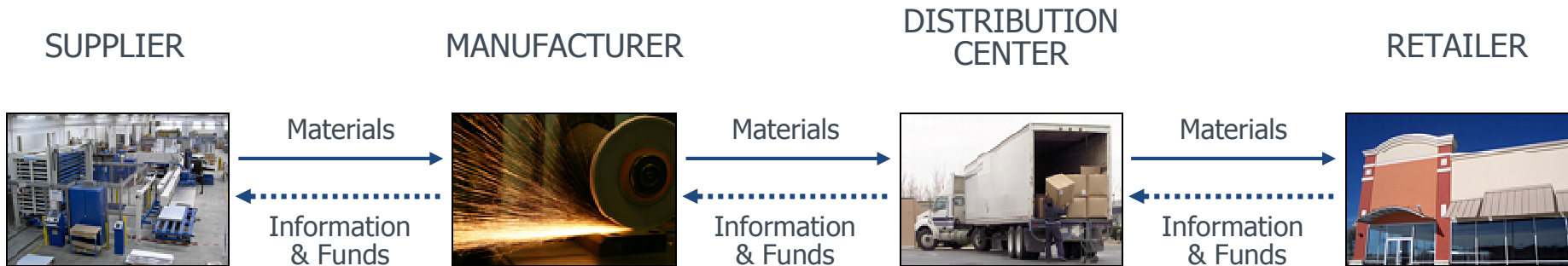
COST CONTAINMENT	SUPPLY CHAIN VISIBILITY	RISK MANAGEMENT	INCREASING CUSTOMER DEMANDS	GLOBALIZATION
55%	70%	60%	56%	43%

- **Cost Containment** – Rapid, constant change is rocking this traditional area of strength and outstripping supply chain executives' ability to adapt.

- **Visibility** – Flooded with more information than ever, supply chain executives still struggle to "see" and act on the right information.

- **Risk** – CFOs are not the only senior executives urgently concerned about risk; risk management ranks remarkably high on the supply chain agenda as well.

- **Customer Intimacy** – Despite demand-driven mantras, companies are better connected to their suppliers than their customers.

- **Globalization** – Contrary to initial rationale, globalization has proven to be more about revenue growth than cost savings.

Source: IBM – **Global Chief Supply Chain Office Study, 2009**

What is Supply Chain Visibility?

| Procure | Produce | Distribute | Fulfill | Sell |

SUPPLIER MANUFACTURER DISTRIBUTION CENTER RETAILER

Materials → Information & Funds

Materials → Information & Funds

Materials → Information & Funds

Daily, Weekly, and Real Time Scorecards and Dashboards
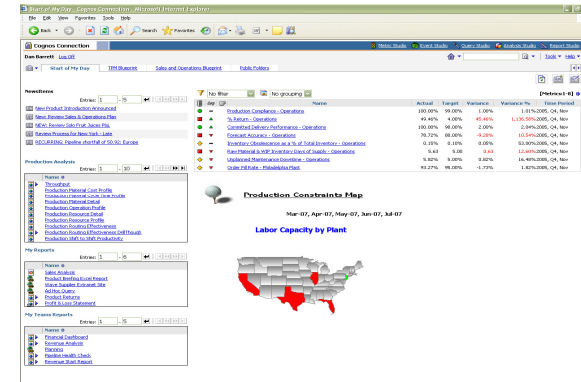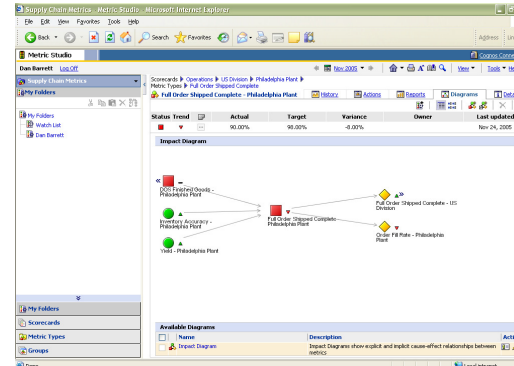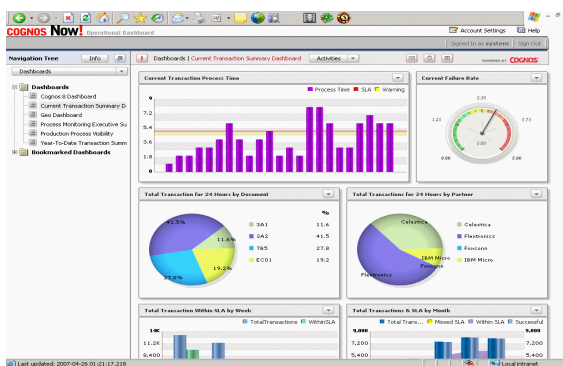
Supply Chain Analytics is Critical Component of SCM

Traditional Supply Chain Visibility Approach Does Not Provide The Required Strategic View

- Users of supply chain technology are, and will continue to be, voracious consumers of analytics in their pursuit of understanding supply chain performance, and how to change/improve it.

- Although supply chain organizations have been predominately operationally/functionally focused, they will increasingly require a more-strategic, end-to-end supply chain analytical focus if they are to continue to perform in increasingly global and complex operating environments. This will drive the need for more of a PPM focus for analytical solutions.

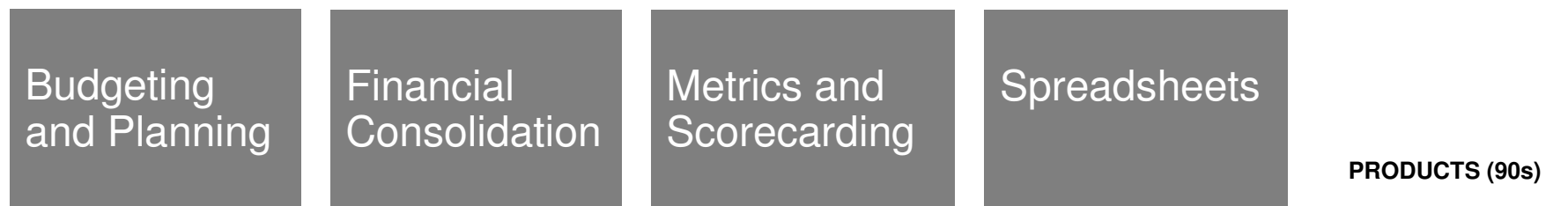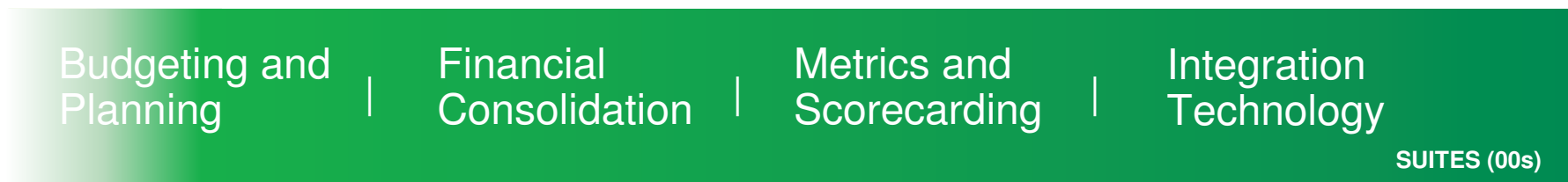*"Although supply chains should live and breathe analytics, because they are fundamental to understanding supply chain behavior, most supply chain groups struggle with an ad-hoc, "mishmash" of fragmented analytical approaches."*

… What is needed is an end-to-end enterprise scorecard for the Supply Chain

Source: Gartner Research - **Supply Chain Analytics: Driving Toward Product Performance Management, 2009**

A Brief History of Performance Management

FINANCE	EXECUTIVES	MANAGERS	LOB	IT

Sales	Marketing	Operations	Workforce	Finance

Your Solutions Platform

Report   Analyze   Model   Plan   Collaborate

Score   Simulate   Forecast   Visualize   Predict

Today

Budgeting and Planning	Financial Consolidation	Metrics and Scorecarding	Integration Technology

SUITES (00s)

Budgeting and Planning	Financial Consolidation	Metrics and Scorecarding	Spreadsheets

PRODUCTS (90s)

A New Era of Smart

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Performance Management today……

Planning, Analysis, Forecasting, and Scorecarding in one platform to speed solution design, use, and agility

- **Drive** alignment and monitor execution with scorecarding integrated in plans & forecasts

- **Model**, Design, Secure, and Roll-Out Solutions in one tool

- **Enable** all performance management experiences across web, desktop, spreadsheet, and Apple iPad

Integrating Financial and Operational Planning is the bedrock of Performance Management Excellence

Integrate finance and operations performance management

IBM advantage

- Financial and operational planning in a single application
- Dynamic, near-real-time forecasting
- Ability to capture forecast data from virtually the entire organization at required levels
- Integrated reports, dashboards and scorecards
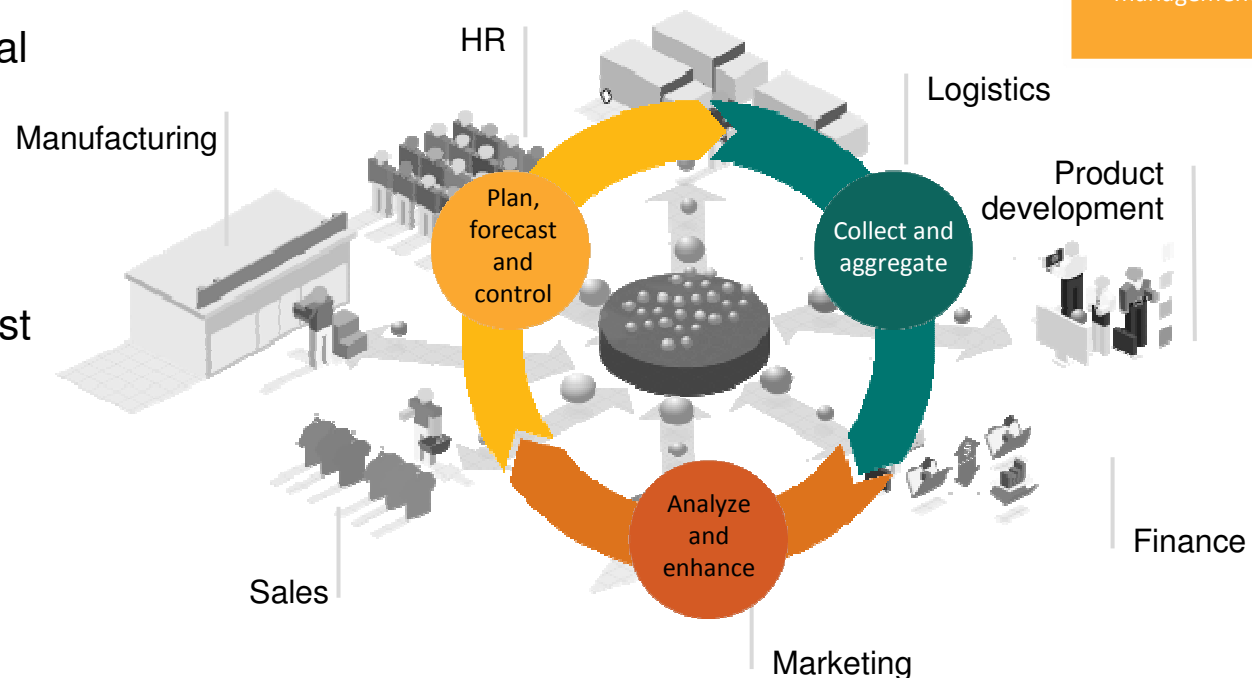
HR

Manufacturing

Logistics

Product development

Plan, forecast and control

Collect and aggregate

Analyze and enhance

Finance

Sales

Marketing

Integrate Finance and Operations Performance Management

Planning, Analysis, Forecasting and Scorecarding in one platform to span Finance and Operations

Strategy and activity driver-aligned organization

Marketing	Sales	Operations	HR	Finance
• Campaign scorecards • Promotion plans • Customer and product profitability • Revenue plans	• Sales dashboards • Sales forecasts • Incentive compensation • Quota plans • Territories • Sales channels	• Operational KPIs • Strategy and operations plans • Capacity and inventory plans • Product allocation • New products	• Workforce KPIs • Headcount plans • Salary and compensation • Staffing plans • Training and development	• Enterprise scorecards • Strategic financial plans • Profit and loss • Balance sheets • Cash flow

Monitor Strategy Execution to quickly recognize Performance Gaps

Integrated scorecards highlight KPI and metric variances

• Communication of strategy and vision to support success

• Visual classification of the results, outcomes and impacts

• Ability to tie strategic plans to forecasting data

ANCAP refines its approach to Operational Analytics

96 percent
reduction in time required to complete budget consolidation processes

Practically instant
generation of reports that previously took 10 days to produce

Increased
operational visibility with access to near-real-time information

Business challenge: How can a leading energy company manage almost every aspect of its business—from refining and logistics through sales and marketing—when time-consuming reporting processes prevent it from gaining a centralized view of its operations?

Analytics journey: Working with IBM Business Partner Quanam, ANCAP deployed a suite of IBM business analytics solutions to help streamline operations by providing a unified, near-real-time view of the business.

"The IBM Cognos solution we implemented was a total success, in every area of the company up to top management levels, and we are absolutely satisfied with the technical support and business insight delivered by both IBM and Quanam."
—Sergio Pi, CIO, ANCAP

Scenario Analytics

- A patented 64-bit, read-write, in-memory, online analytical processing (OLAP) engine provides analysis beyond the financial planning process to:
  - Profitability modeling
  - Detailed customer analysis
  - Marketing campaign analysis
  - Sales forecasting
  - Headcount analysis
  - Almost anywhere there are large amounts of disparate data

- Supports multidimensional analysis
- Advanced sorting and ranking
- Familiar Microsoft Excel and web interfaces

Infuse scenario and predictive intelligence
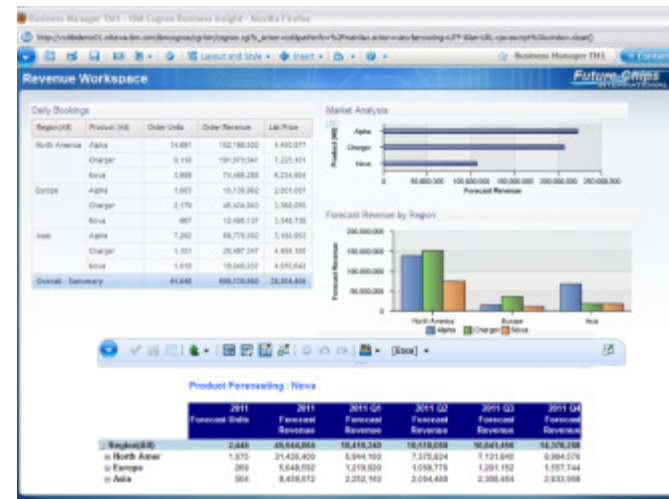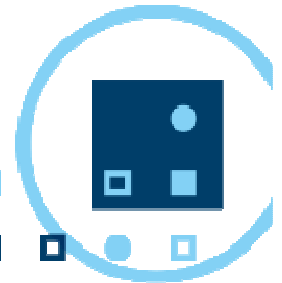
Profitability Modeling

- Modeling and quantifying the business

- Scaling the analytics to include small subsets of the business to the entire organization

- Providing an interactive user experience to manage data and scenarios

- Enabling scope to cover almost all operational and financial aspects of the business

- Direct integration to predictive intelligence modeling for statistical impact

Consumer data

Transaction history

Social media history

Transaction history

Profitability analysis on retention, performance and patterns

Likelihood of churn

Future lifetime value

Credit worthiness
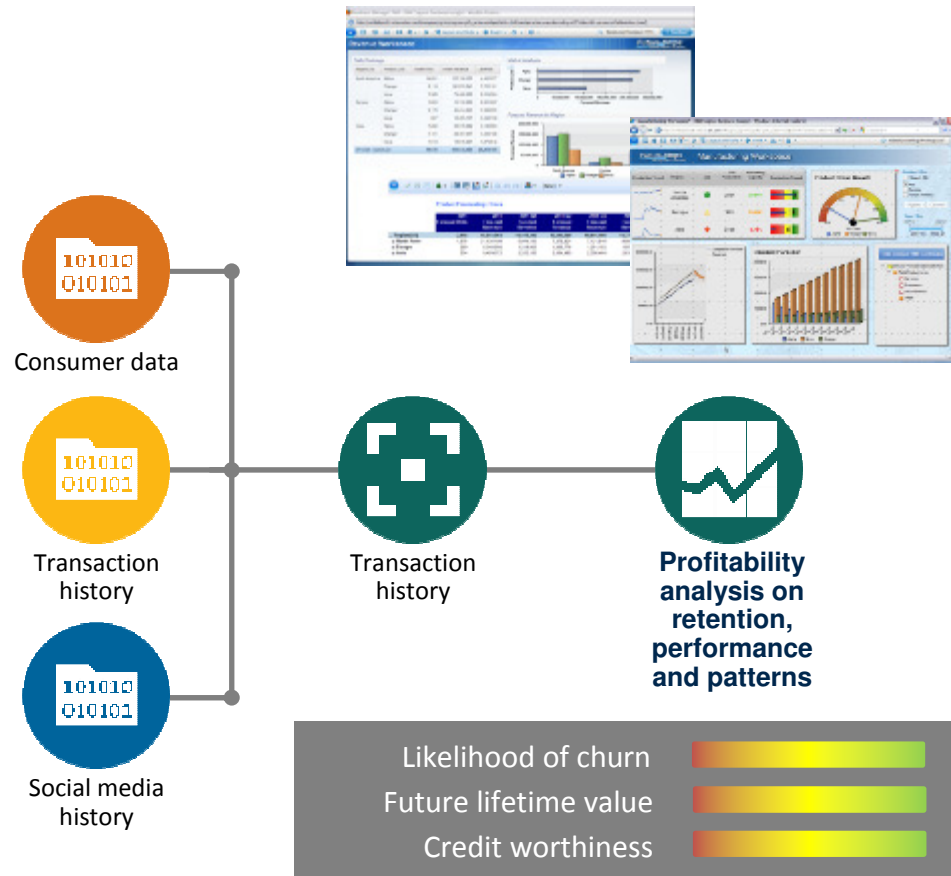
McCormick protects profit with detailed understanding of customer value and uncertain prices

Challenge

- **Significantly reduce** the profit at risk because of volatile commodity input prices

Solution

- **Collect and analyze** sales plan data by customer and across more than 30,000 SKUs
- **Evaluate** the resulting profit contribution of product input in the bill of material

Results

- **Diagnosed profit improvement moves** ahead of time; commodity price increases can be passed on to consumers or renegotiated with industrial customers
- **Conducted value engineering** with operations to reformulate flavors using commodities from different regions and suppliers
- IBM Cognos software **helped McCormick record USD56 million in cost savings** from its comprehensive and continual improvement program

McCORMICK

McCormick is a global leader in flavor. With more than USD4 billion in annual sales, the company manufactures, markets and distributes spices, seasoning mixes, condiments and other flavorful products to the entire food industry—retail outlets, food manufacturers and food service businesses in more than 110 countries.

IBM

IBM CFO Performance Insight CFO Performance Dashboard
How it works

Pre-configured reports, dashboards and planning models built on IBM Cognos and IBM SPSS software

Predictive Analytics

Temporal Causal Modeling
- **Discover causal relationships**
- **Assess lead-lag indicators**
- **Examine strength of metrics relationships and degrees of separation**
- **Anticipate the momentum of metrics drivers**

Performance Measurement & Monitoring

Integrated Analytics
- **Identify performance gaps for critical KPI's**
- **Analyze root causes guided by discovered causal relationships**
- **Assess the impact of alternatives scenarios**
- **Enable effective decision making**

Advanced analytics increase visibility, insight and control over performance

What-if Analysis

Scenario Planning
- **Model multi-dimensional business structures**
- **Evaluate the impact of alternative assumptions**
- **Immediately report on alternative scenarios**

Information Management Foundation

Data Warehouse

Data Integration

Source Systems – ERP, G/L, Legacy Systems

Becker Underwood transformed its Planning and Performance Management

CHALLENGE

- Corporate expansion through acquisitions and organic growth resulted in **lack of visibility** and **consistency**

SOLUTION

- Implemented planning to achieve quick, high-impact **results focused on sales** and **order/refresh** process
- Incorporated customer and product-level plans into a 12-month rolling forecast for **greater visibility**

RESULTS

- **Resolved supply chain issues** resulting in 50 percent decrease over three years
- Incorporated **order data into the forecast process** and increased accuracy by up to 15 percent
- Better **access to information** across the organization has led to better customer service and shorter lead times

BECKER UNDERWOOD®

Becker Underwood produces specialty bio-agronomic and colorant products. Founded in 1982 and headquartered in Ames, Iowa, the company's annual revenues are more than $240 million.

Becker Underwood Return on Investment

Independent analysis by Nucleus Research:

- **ROI: 383%**
- **Payback: 4 months**

Better discounts from suppliers due to improved communication and raw material forecasts

Inventory reduction due to better forecasts

Timely ordering of supplies and better delivery to customers

"Our investment in business intelligence and analytics has really paid dividends for our Company. The forecasting and planning processes between our operations and sales teams now run much more seamlessly, and the real time information that is available to us is invaluable. These are innovations that we have come to rely on, have adopted quickly, and have become an integral part of our company."

*Peter Innes,
Chief Executive Officer,
Becker Underwood*

Source: Avaya and Nucleus Research

PepsiCo builds a planning model for complex European markets

One source
of truth for financial and operational planning

Near-instant
reporting helps PepsiCo make better business decisions

Hundreds
of hours avoided on low-level spreadsheet work for PepsiCo analysts

Business challenge: With separate planning processes for its food and beverage businesses, PepsiCo BeLux found it difficult to gain a consolidated view of operations, and its spreadsheet-based models were prone to error.

Analytics journey: PepsiCo BeLux built a sophisticated beverage planning model in IBM® Cognos® TM1®, and migrated its food model onto the same platform. The new model will be rolled out for the Dutch and Nordic markets.

"With a standardized approach to business planning based on a single platform, our finance team is in a strong position to help PepsiCo maintain its success across these key European markets."
—*Joelle Perez, Head of Customer Profitability & Business Planning, PepsiCo BeLux*

Solution Components

- IBM® Cognos® TM1®
- IBM Business Analytics Software Services

IBM

U.S. Lumber

BI tools provide immediate, intuitive insight into hourly and long-term business needs

The need:

U.S. Lumber had limited visibility into business metrics. Performing analyses was labor intensive and costly. Plus, static and inflexible reports were not supporting effective decision making.

The solution:

The company took advantage of web-based functionality that allows the finance team to publish standardized reports and tools to the web, effectively creating department-specific portals. Staff and line-of-business (LOB) manager can create ad-hoc and end-user reports without the assistance of IT or finance. Java software-based functionality allows users to drill into databases or reports that are continuously updated for new transactions.

What makes it smarter:

- Improved productivity by an average of 13 percent for the 120 users
- Reduced financing costs by accelerating turnover of both AR and inventory

"Previously, we would have an application created for us by an outside company. This became expensive, as an update to a third-party procurement application would have cost us $100,000. With IBM Cognos 8 BI, we can create our own applications that are ten times more sophisticated and flexible than any of the applications created by third-party vendors."

Felipe Herrera, Senior Financial Analyst, US Lumber Group

U.S. LUMBER

Analytics for Optimizing Global Operations

Capturing and Consolidating those insights generated at multiple touch-points will deliver a more complete view than traditional analytics

Capture and Analyze

Take Action

Structured & Unstructured Data

- Surveys, Focus groups
- Retailer POS Data
- E-Commerce
- Web Browsing
- Contact Center
- Social Media

Extract trends

Expose patterns

Discover relationships

Marketing Campaigns

PR Activities

Product Development

Packaging Design

Category Management

Sales

IBM Social Media Analytics:
Understand sentiment and digital influencers across all aspects of your organization

- **Assess** Social Media Impact

- **Segment** Social Media Audiences

- **Identify** Relevant Relationships

- **Discover** new ideas…and risks

IBM Social Media Analytics

- Deployment options: SaaS or On-Premise
- IBM Research assets for demographic, geographic and behavioral analytics

- Big Data capability built

- SPSS advanced analytics for best in class sentiment analysis and segmentation

- Six distinct sentiment languages: English, German, French, Chinese, Spanish & Dutch
- Influencer analysis

- Prebuilt dashboards

- User editable and configurable dashboards

IBM

Product Brand Check
…What Do Customers Think About My Product?

Growing product line wanted to capitalize on consumer themes to better engage target segment …

… social insight of competitors led to internal assumptions regarding the product's price

Identified key social channels to gain feedback into the product line to more effectively serve them

Neutral 37.3%
Positive 46.6%
Negative 12.1%
Ambivalent 4.0%
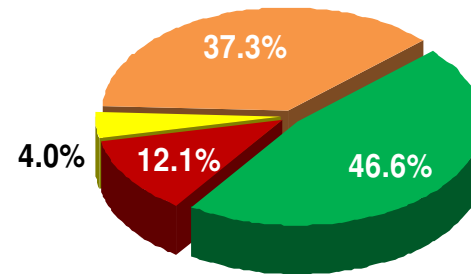
■ Neutral ■ Positive ■ Negative ■ Ambivalent

- **Identified discussion volume across multiple social channels**
- **Measured consumer reaction**
- **Compared results with traditional research data**

- **Drove market actions that prevented costly pricing discounts and package re-design**

Transforming Business Process with Deeper Insights

Optimize Global Operations

Enhance Supply Chain Planning & Production Efficiency
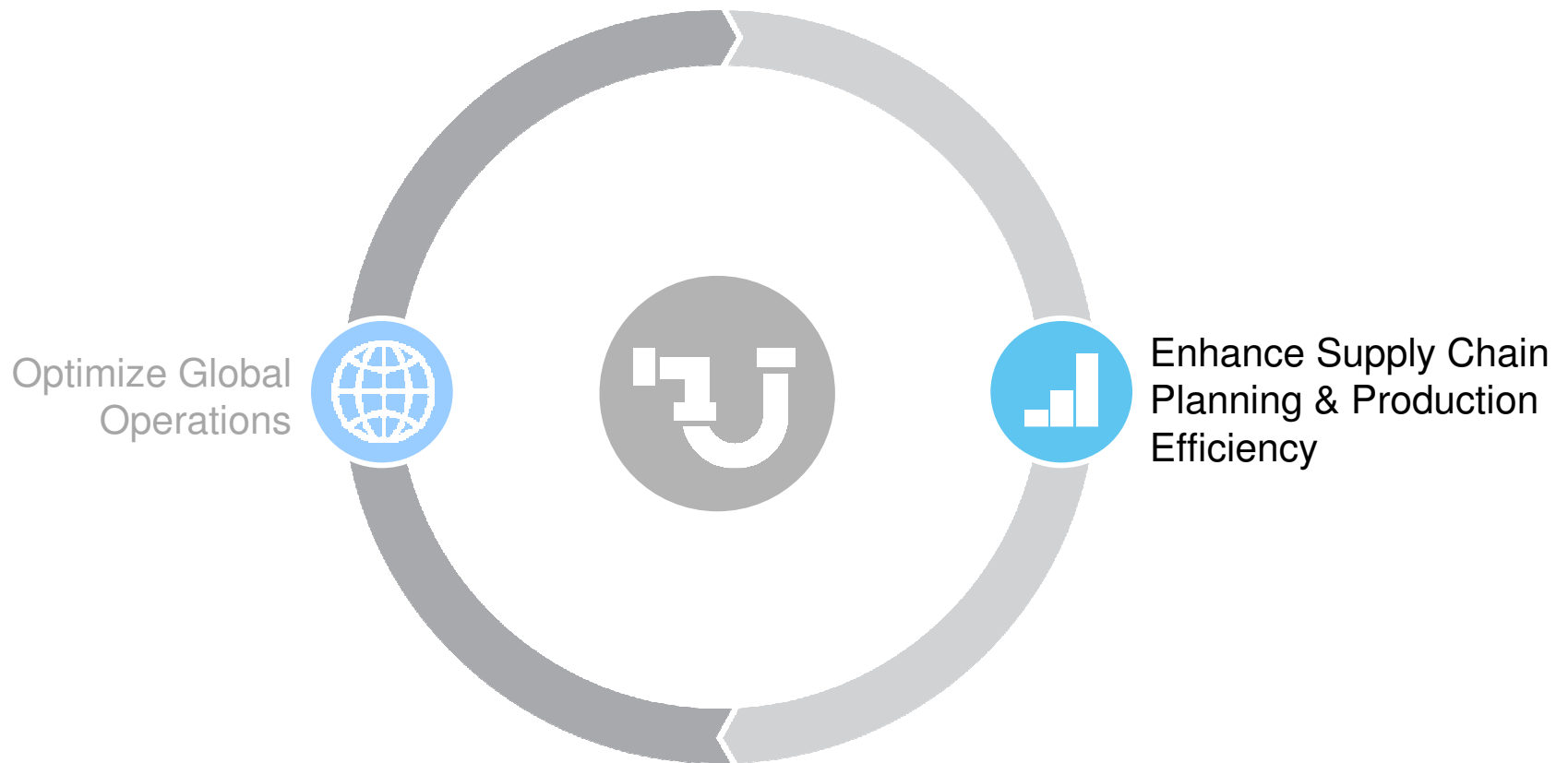
Focus on Improving Production Efficiency

How can I optimize the entire supply chain process?

How can I optimize my most valuable asset—my people?

How do I ensure that production is meeting targets?

What if I could predict which part or system is about to fail?

How can I utilize predictive analytics to reduce production downtime?

Is inventory being optimized?

How can I generate accurate forecasts and use these to drive production plans?

How can I be alerted when there are constraints in my supply chain … with enough time to fix the issue?

Analytics for Improving Production Efficiency

Improved decision making through end-to-end supply chain visibility

Supply Chain Operations Reference (SCOR) metrics

- Monitor end-to-end supply chain performance through predefined industry-standard Supply Chain Council SCOR metrics[3]

- Delivers functional view based upon execution criteria: Plan, Source, Make, Deliver, Return

- Monitor performance based on the five SCOR attributes—reliability, responsiveness, agility, cost and assets

- Consistently measure and compare multiple divisions, plants and departments

- Identify root causes of supply chain issues in order to take early corrective action
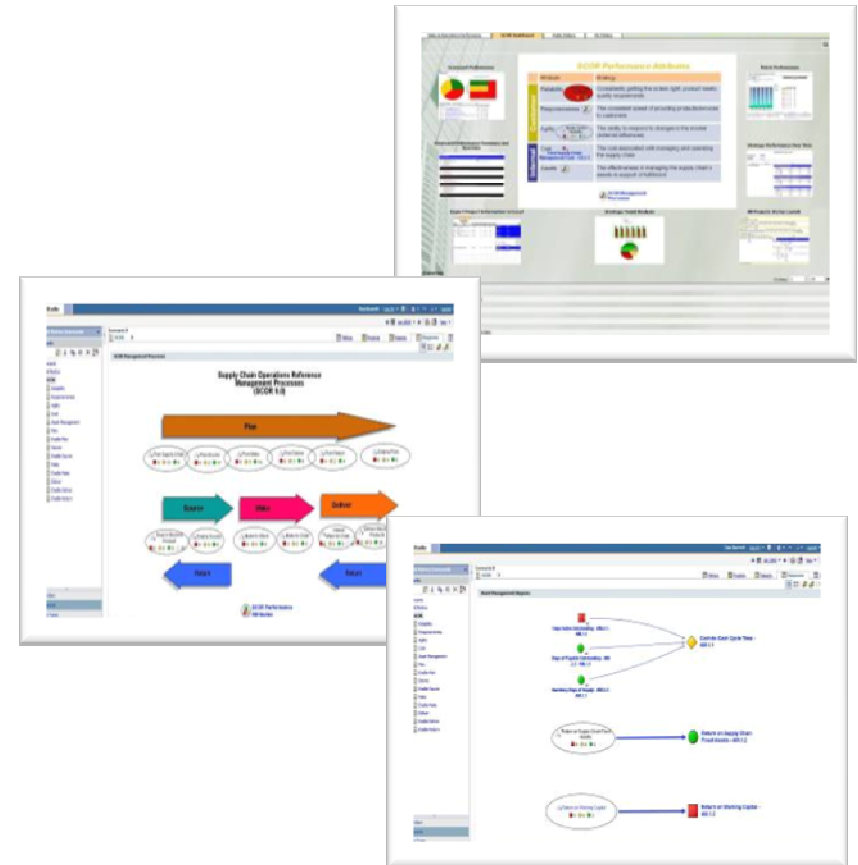
3 Supply Chain Council, "What is SCOR?", web page, 2011; http://supply-chain.org/scor

A customer Success Story: Avaya

AVAYA

INCREASE

$40M

↑ **REVENUE PERFORMANCE**

- Extended visibility into global supply chain.

- End-to-end analysis of value chain operations in an SAP environment.

- Protected itself from supply chain disruption while simultaneously improving productivity.

↑ Revenue protected from SC disruption

>US$40-50M

↓ Reduced staff and time spend on supply chain analysis

Analytics for Improving Production Efficiency – Predictive Analytics
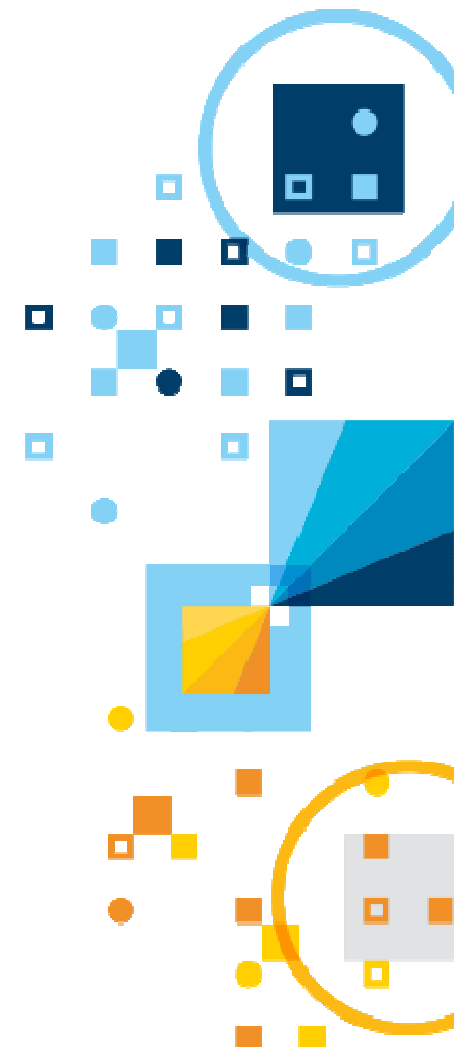
Predictive analytics helps connect data to
effective action by *drawing reliable conclusions*
about current conditions and future events.

*—Gareth Herschel, research
director,
Gartner Group*

IBM SPSS Predictive Analytics in the Industrial Sector

❑ Predictive Analytics in the industrial sector

▪ Quality & production for early series and modifications

  ✓ Early warning, preventions, performance of problem solving

  ✓ Reduce unscheduled stoppages through Predictive Maintenance

▪ Dealer systems

  ✓ Anomalies in billing, hidden repeat repair, complaints

▪ Sales & Marketing

  ✓ Forecasting, campaign optimization, product recommendations, customer segmentation

Mueller, Inc. uses advanced business analytics to transform its business model, becoming an information-driven enterprise
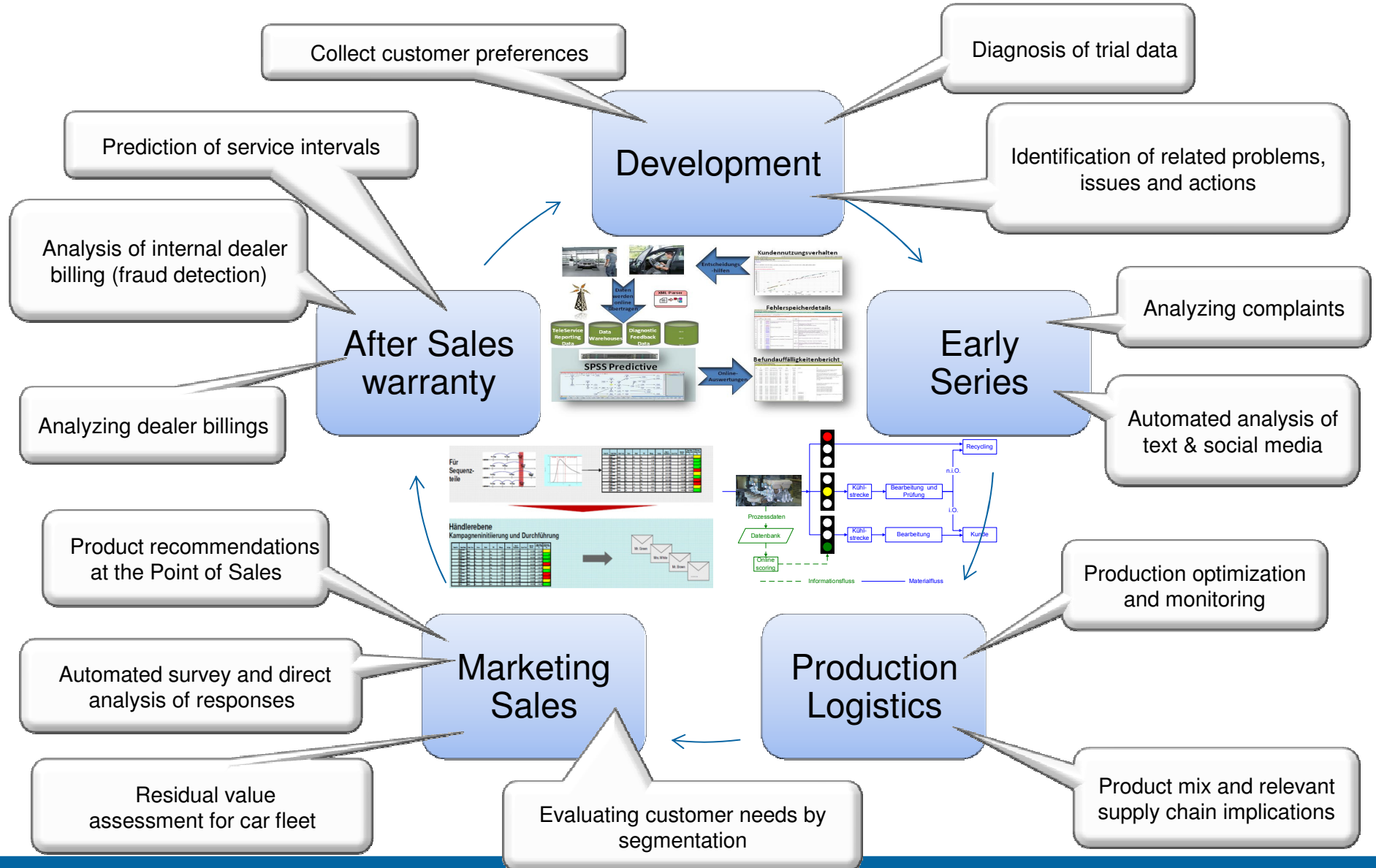

113% return on investment
through use of business analytics

20–30% reduction
in scrap metal manufacturing waste

20% return on assets
resulting from rapid identification and tracking of business process improvements

Business challenge: A shift in business strategy from manufacturing to retail drove a comprehensive cultural transformation within U.S. manufacturer Mueller Inc. The company needed to analyze its business processes and performance to assess how well employees were adapting to its new business strategy.

The smarter solution: Mueller implemented business analytics technology that enables company employees to view and analyze company data in near-real time, empowering workers to measure individual performance and assess how their work affects the bottom line.

"We can show sales teams exactly how they are contributing to the business and explain what they need to do to improve their metrics...a much more effective way of driving the changes in behavior that are vital for business transformation."
—Mark Lack, manager of strategy analytics and business intelligence

At IBM, we applied advanced condition monitoring in a Quality Early Warning System (QEWS) to identify trends in Supply Chain before traditional SPC

Challenge

Quality and supply chain managers need advanced techniques to examine quality date from tens of thousands of parts (incoming, manufactured, deployed) and to provide better, more proactive quality management

Solution

Software system which uses proprietary IBM technology to detect & prioritize quality problems earlier with fewer false alarms, coupled with push alert functionality for IBM & suppliers to proactively detect & manage quality issues at any stage of product lifecycle

Business Value at IBM

- **Cost savings** – $39M in hard warranty savings, with additional soft savings and benefits in other areas
- **Proactive quality mgt** – identify and resolve issues before they become problems, up to 6 weeks earlier than traditional SPC
- **Improved quality processes** – improves quality process efficiency & effectiveness

Key Innovations

- Earlier identification of quality issues through proprietary analytic techniques
- Fewer false alarms
- Structured issue prioritization, management, follow-up

Distills an ocean of supply chain quality data into prioritized, actionable issues

Results from QEWS Proof of Concept at external client

Case Study: Predictive Casting Quality for BMW

By predicting casting quality, IBM was able to reduce scrap rate by 80% in 12 weeks at a BMW light-alloy foundry

Process info

Database

Online scoring

Recycling

not OK

Cooling → Processing and Testing

OK

Cooling → Processing → Customer

- - - Information flow   ——— Material flow
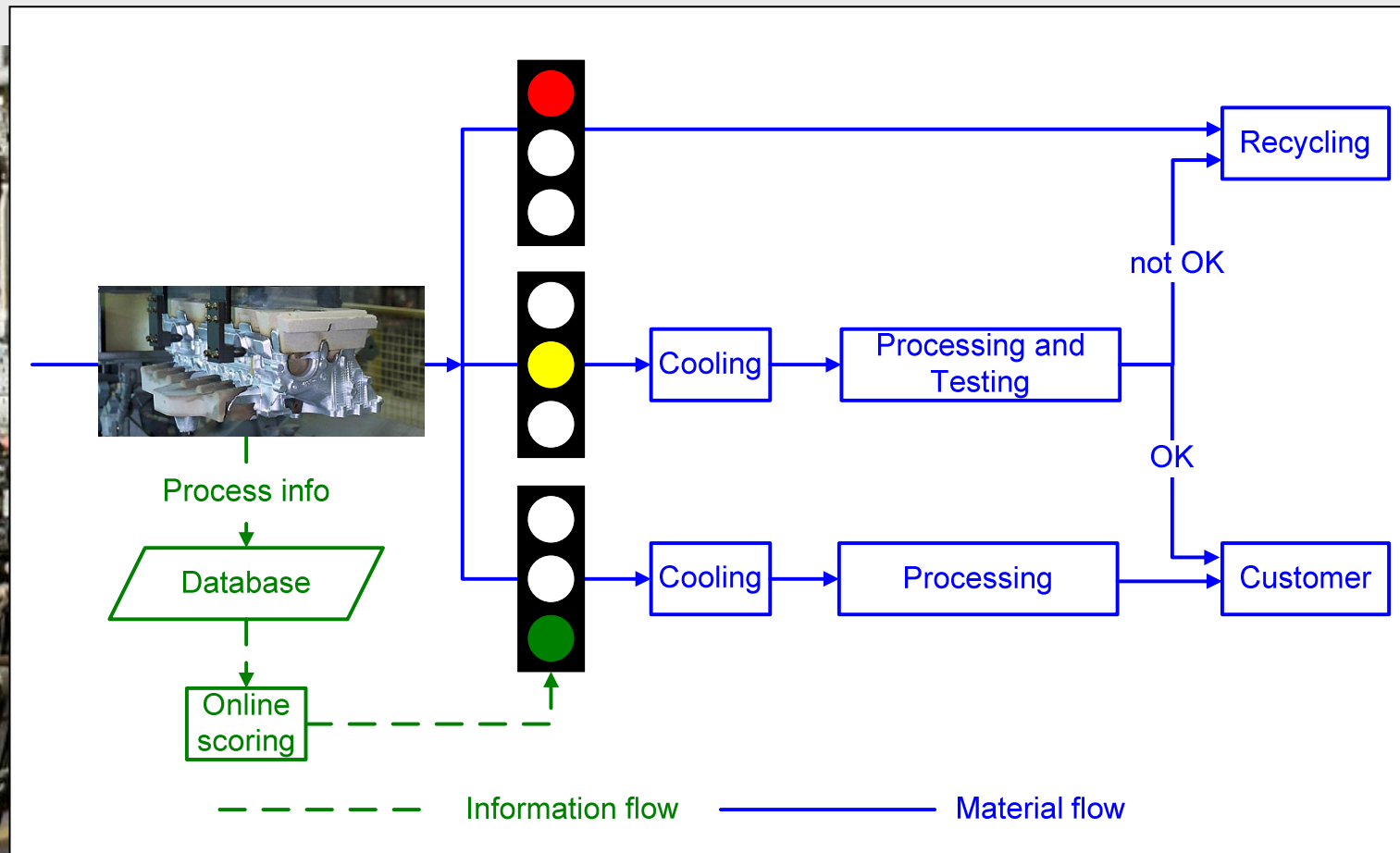
IBM Business Analytics and Performance Management Platform

Executive management

Supply chain management

Finance management

Sales management

Customer service

Marketing management

How are we doing?

Deliver immediate insights into business performance
- View at-a-glance supply chain performance
- Rank stores by region
- Compare labor expenses to budget
- Identify profitable customers

Why?

Enable deeper analysis of trends and patterns
- Predict and forecast possible outcomes and build an effective intervention strategy to keep strategy and cost on track
- Effectively react to supply chain disruption to meet planned performance

What should we be doing?

Provide foresight needed to plan and allocate resources
- Optimize product profitability
- Improve financial and operational planning
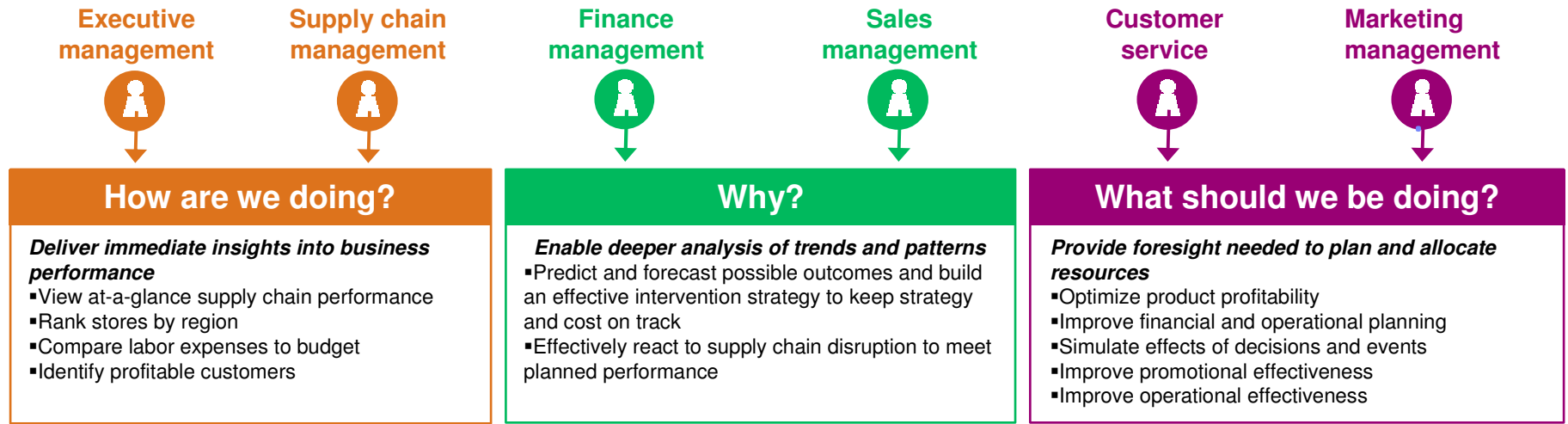- Simulate effects of decisions and events
- Improve promotional effectiveness
- Improve operational effectiveness

Smartphone	PowerPoint	Browser	Excel	Email	Tablet

IBM Business Analytics capabilities

Dashboards	Scorecards	Reports	Queries	Analysis	What-if	Predictive modeling	Planning/ budgeting

IBM Business Analytics platform

Enterprise resource planning (ERP) data	Customer/sa les data	Production/manufacturing execution system (MES) data	Supply chain data	Logistics/third-party logistics (3PL) data

Manufacturing Companies That Outperform Use IBM Business Analytics

2,742%
Return on investment (ROI)

3 minutes
Time to receive reports, rather than 3-4 days

3,623%, 11days
ROI and payback

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Thank You