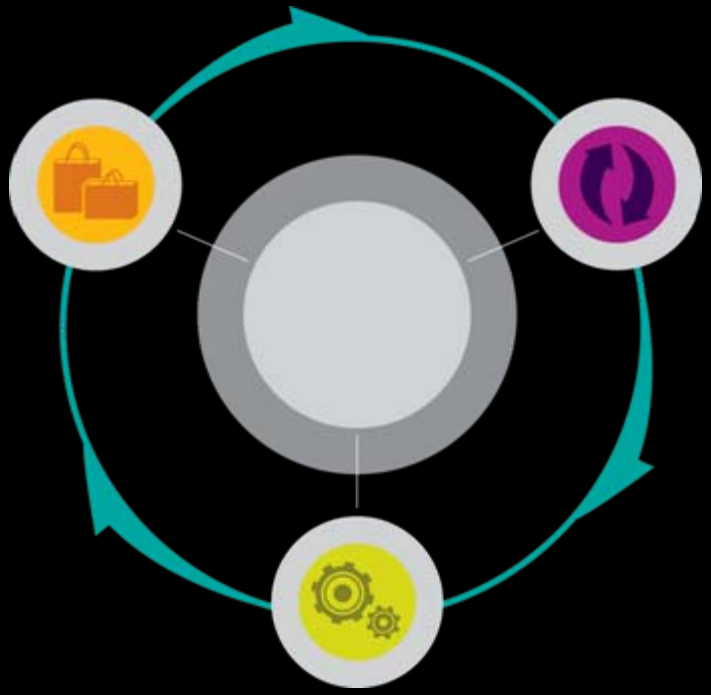
IBM Global Business Services

Supply Chain Visibility



Bill Gilmour

Today's key message: Visibility too good to have, but it's not as easy as you may think!

The collective insights from 400 Supply Chain Executives identified five major challenges and Visibility was No.1

Source: IBM Chief Supply Chain Office Survey

55%

COST CONTAINMENT

Fighting integral costs as such as might be futile, but being flexible can identify cost savings elsewhere

70%

SUPPLY CHAIN VISIBILITY

Supply chain visibility is inhibited by a lack of capabilities and an unwillingness to collaborate.

60%

RISK MANAGEMENT

Process, data, & technology are identified as the roadblocks to good risk management, yet they are the key enablers.

56%

INCREASING CUSTOMER DEMANDS

Customers have increased demand for more precise synchronization of supply and demand.

43%

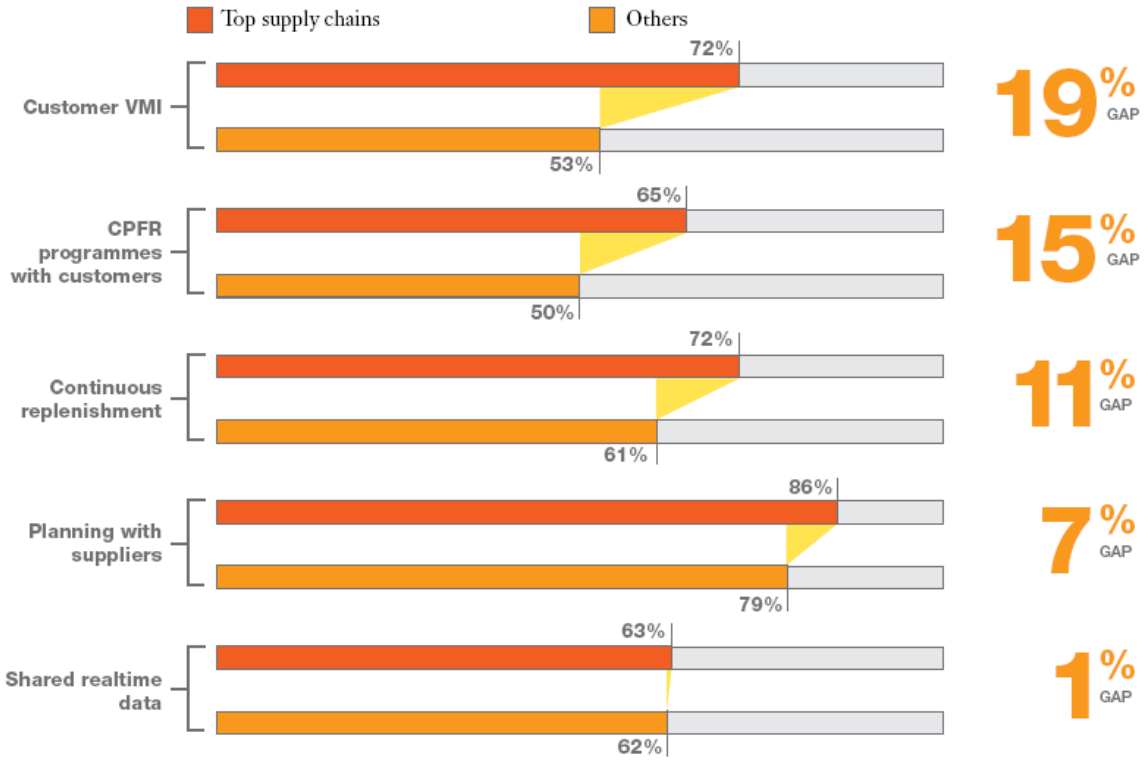
GLOBALIZATION

Lead times, delivery, and quality are top challenges, but overall globalization has been a positive boon for all.

Based on responses of "to a very great extent" and "to a significant extent"

Implementation is patchy, but is distinctive in top performing supply chains. It is worth it!

Percentage of organisations that have implemented Visibility solutions



"Driving integration and visibility of information inside our recipients' organisations ranks fourth on their priority list, and external visibility falls even lower – in seventh place.

Though it may seem logical to blame poor visibility and collaboration on inadequate IT, supply chain executives point elsewhere.

Not surprisingly, organisational silos are the biggest barrier. But we were shocked at how many executives reported that their organisations are too busy to share information or simply do not believe collaborative decision making is that important."

* Top supply chains determined based on respondents' ranking in AMR Research Supply Chain Top 25 for 2008

The need for progress is already clear…..

70%

The percentage of the world's fresh water supply used by agriculture.

300 million

Pounds of meat and poultry recalled in the US in the last 15 years

1600 miles

How far a typical carrot travels before it is purchased by the consumer.

$50+ billion annually

Or 3-5% of sales lost due to supply chain inefficiencies

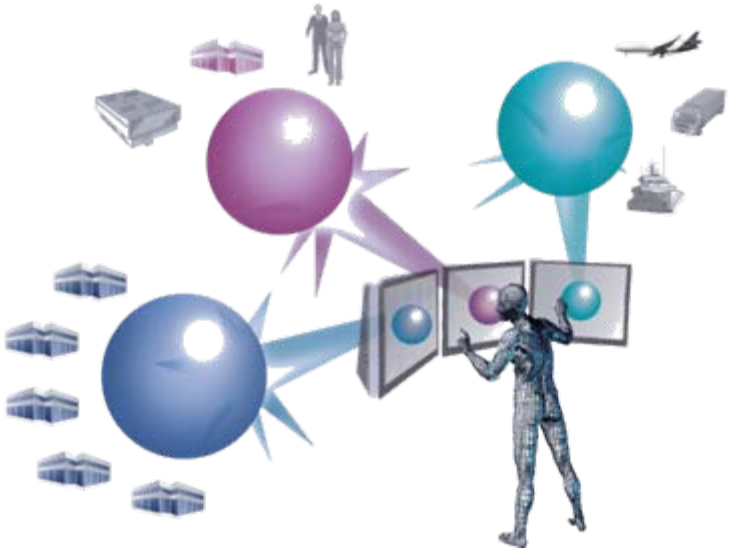
30%

Of the food purchased in the developed nations is going to waste

Albrecht Durer's -
The Four Horsemen of the Apocalypse

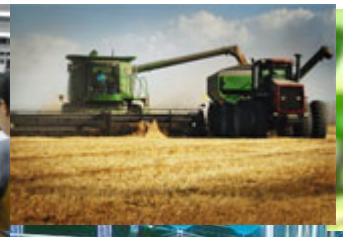
So, the key questions for the presentation are:

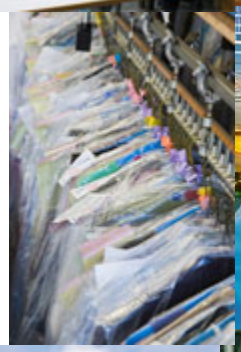
- What do we mean by Supply Chain Visibility, and do we all mean the same thing?
- What are the issues and barriers?
- Case studies, why is visibility such a hot topic? What benefits does it provide?
- What do you have to get right? Its not all about technology

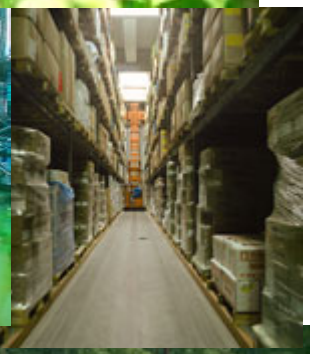


What do we mean by Supply Chain Visibility, and do we all mean the same thing?

- Visibility of;
  - Products whereabouts / status
  - Real time demand and demand plans
  - Supply plans
  - Inventory levels by location
  - Orders
- And visibility of assets e.g;
  - Vehicles, condition and capacity
  - People and capabilities





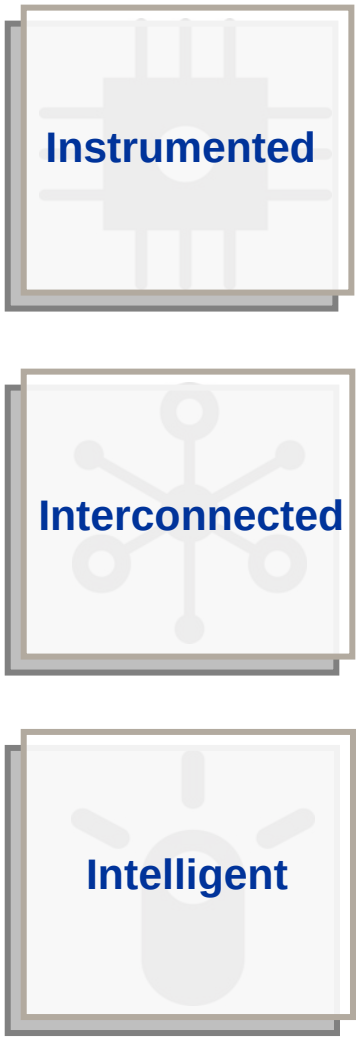






If you can't measure it, you can't manage it!

The Supply Chain of the Future must be SMARTER...It will be Instrumented, Interconnected & Intelligent



Automated Transactions & Smart Devices

- Use of sensors, actuators, RFID, & smart devices to ***automate transactions***: inventory location, shelf-level replenishment detection, transportation locations & bottlenecks
- Supports ***real-time data collection & transparency*** from POS to manufacturing to raw material
- ***Sense-and-respond*** demand/supply signals allow "predict and act"

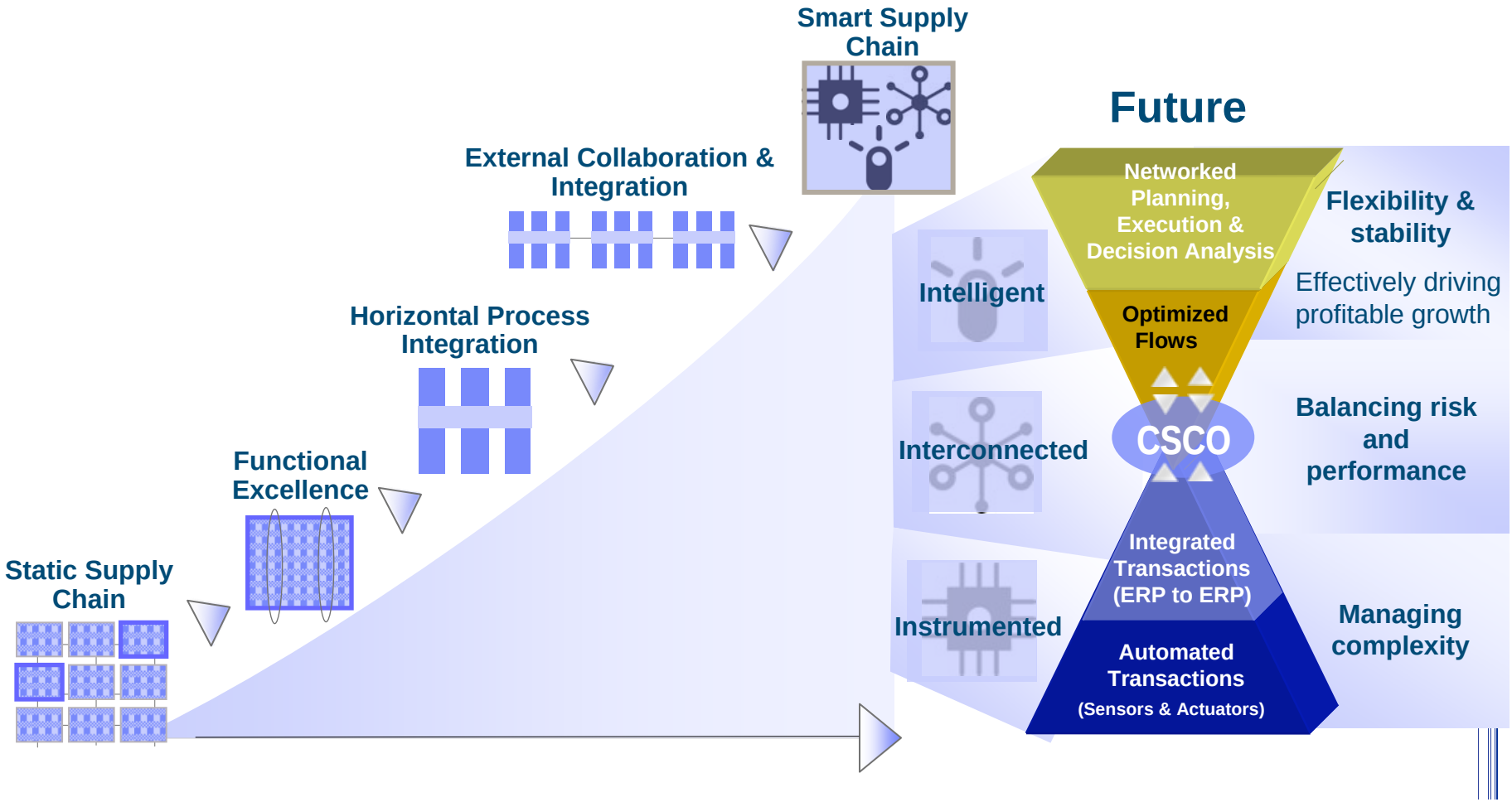
Optimized Flows

- Multi-Tier ***system integration*** across the network. Standardized data and processes.
- ***Collaborative decision making*** through decision support and business intelligence – starting with the customer
- ***Networked risk management programs*** for integrated financial controls with operational performance – monitored and measured

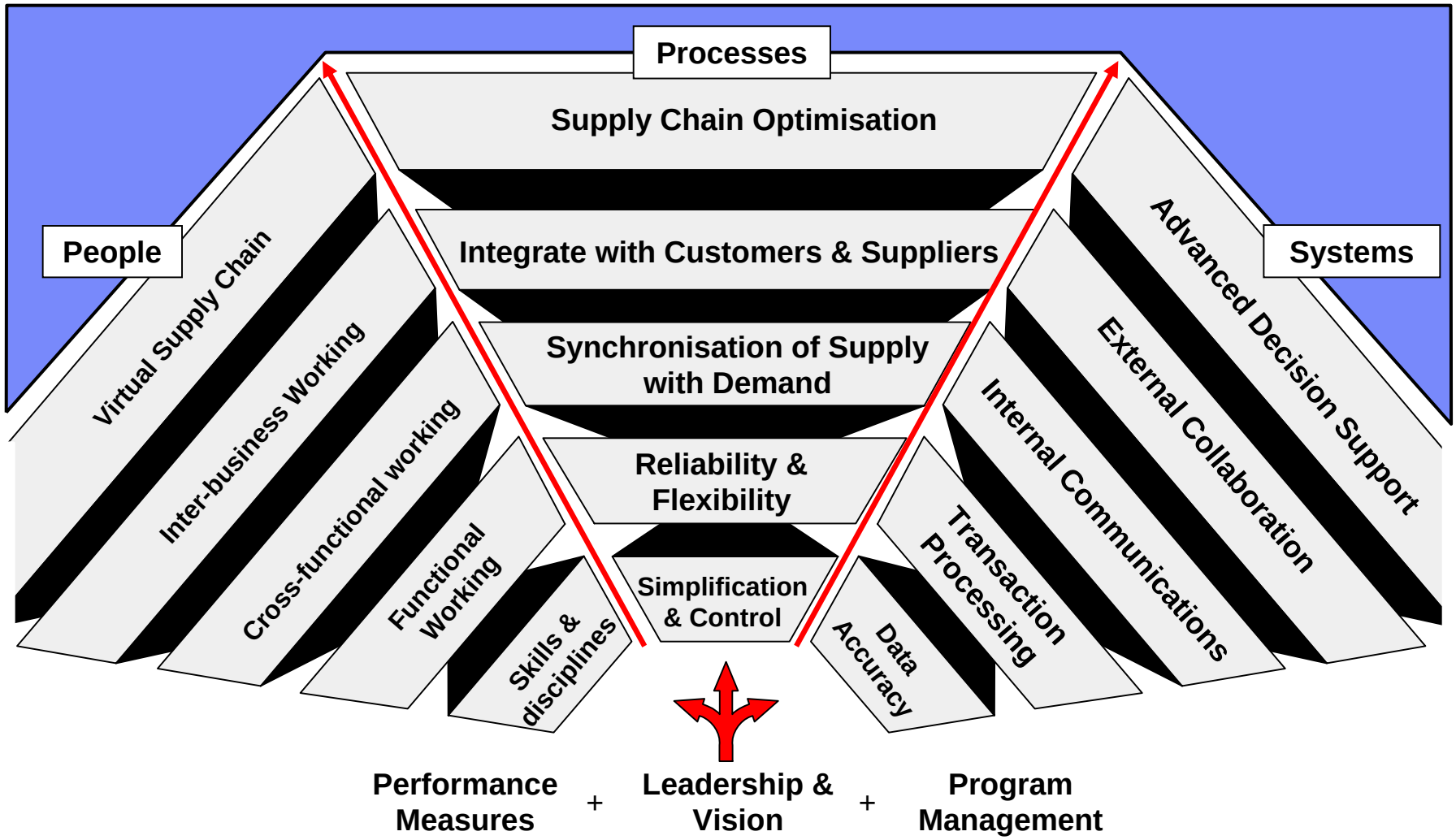
Networked Planning, Execution & Decision Analysis

- ***Simulation models to evaluate trade-offs*** of cost, time, quality, service and carbon and other criteria
- Probability-based risk assessment & ***predictive analysis***
- Networked planning/execution with ***optimized*** forecasts & decision support

How can it be so very difficult when we have the ability to use all these assets: Our Point of View on the Progression of Supply Chain Management to a Smarter Future



To step forward a business needs to align each dimension

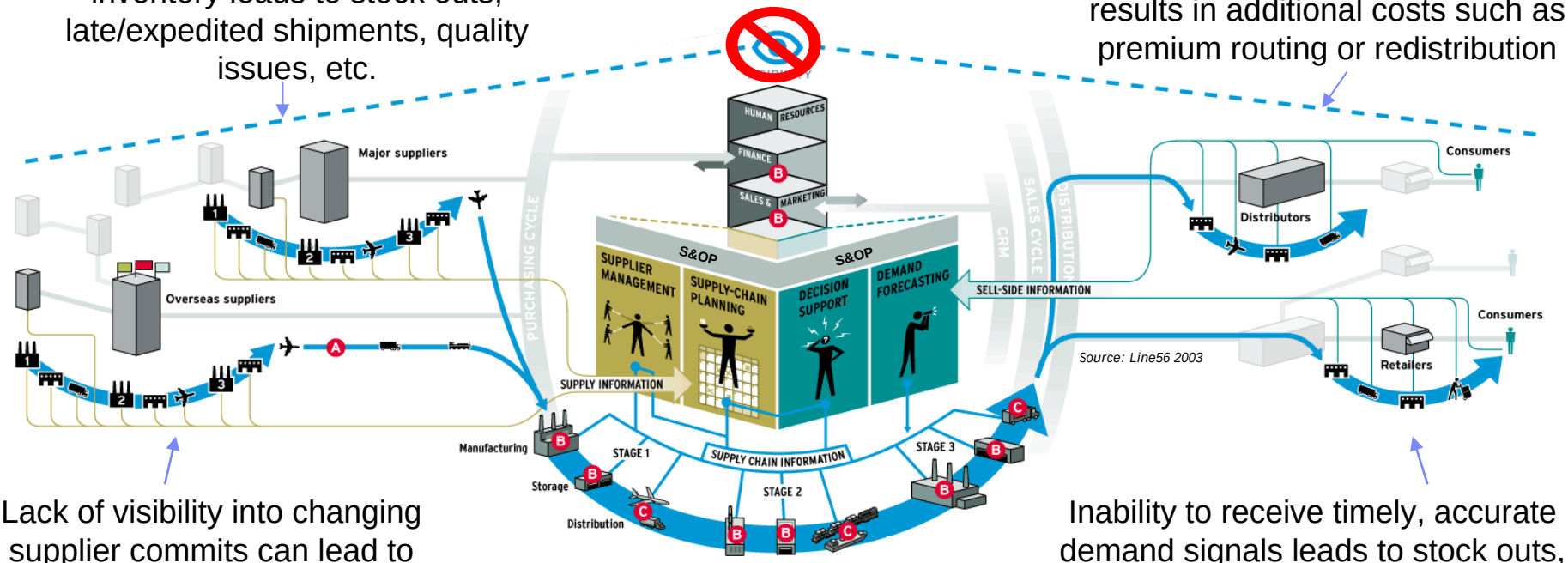


Establishing the starting point focuses the action plans

Case study 1. IBM: An electronics manufacturer needing to control its supply to assure availability

Lack of visibility into supplier inventory leads to stock outs, late/expedited shipments, quality issues, etc.

Lack of timely information on forecast, supply, or customer orders results in additional costs such as premium routing or redistribution



Sales & Operations Planning Process

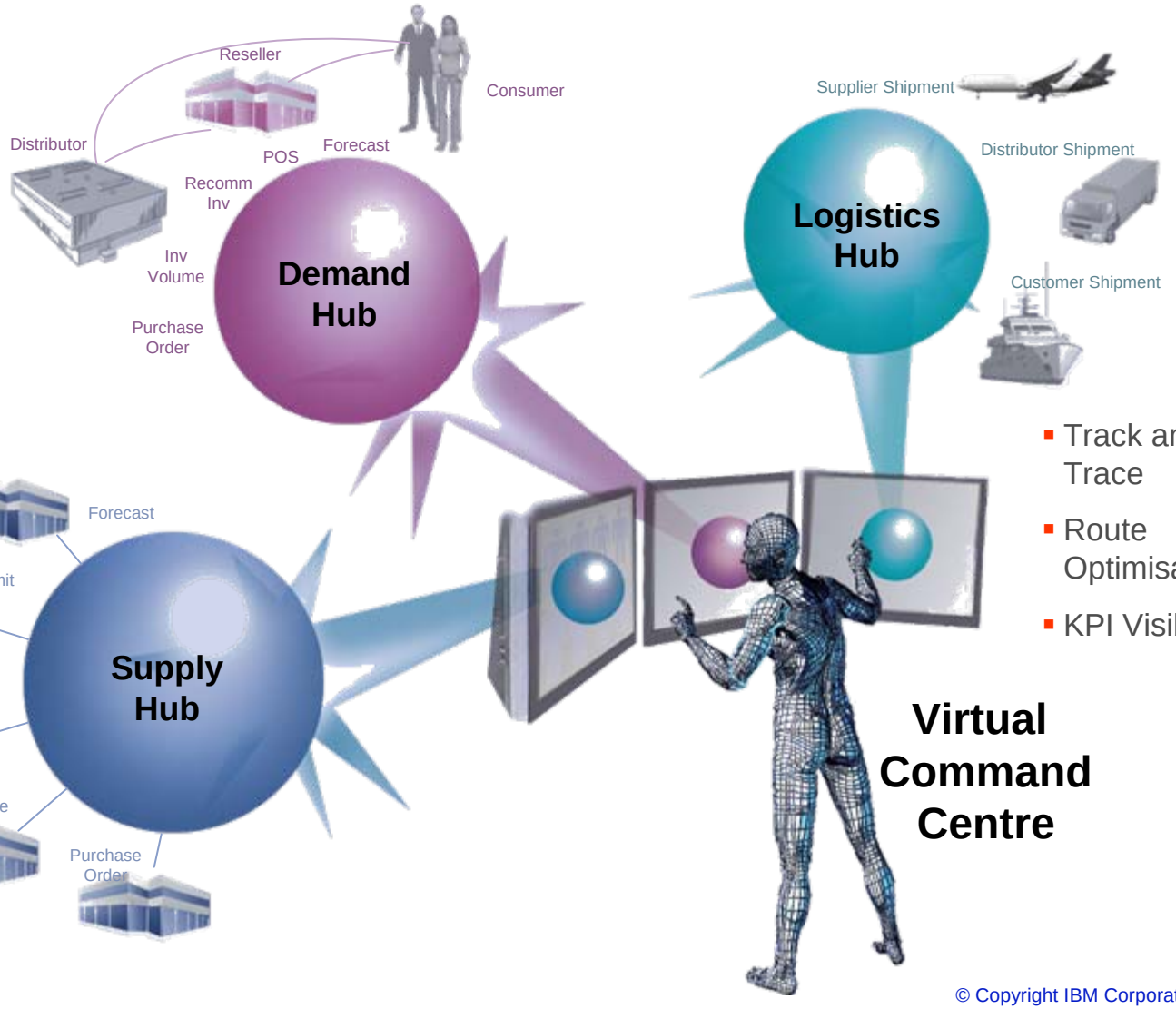
Lack of visibility into changing supplier commits can lead to inaccurate customer commitments or financial projections

Lack of visibility and timely information lengthens the cash-to-cash cycle, reducing profitability

Inability to receive timely, accurate demand signals leads to stock outs, excess/obsolete inventory, higher cost, lost revenue, and poor customer satisfaction.

Case study 1. IBM: Our response is a “Virtual Command Centre”, providing access to our customers and suppliers’ planning data

- Demand Driven Replenishment
- Demand Forecasting
- Inventory Optimization
- Proactive Buy-Sales Decision
- Event Management
- S&OP Support



- Inventory Optimisation
- Supplier Collaboration
- KPI Visibility
- Dynamic Supply Demand Balancing

- Track and Trace
- Route Optimisation
- KPI Visibility

Case study 2. GS1 "Data Crunch" project focussed on data quality between UK Retailers and Consumer Product companies

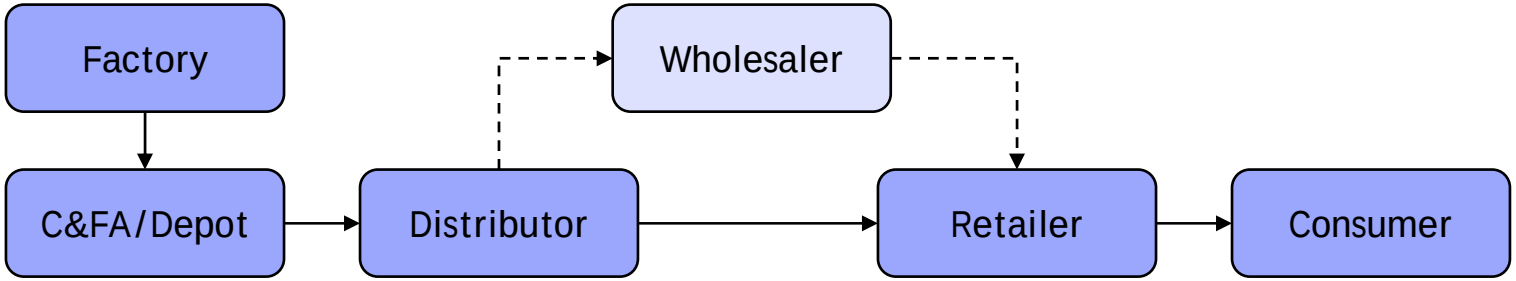
- The project is supported by four top UK grocery retailers and three top suppliers
- Each had provided a snapshot of their supply chain master data for analysis which is over one million records
- IBM is providing software and related services to assist GS1 UK

> IBM has announced an agreement with GS1 UK, the independent global supply chain data standards and solutions organisation, to provide analytical and technology services for the Grocery Industry Data Crunch Project ("Data Crunch Project"), which aims to assess the business impact of supply chain data inaccuracies.

Source: British Retail Consortium
Issue 14 July- August 2009

- The objective is address a knowledge gap in the grocery industry as retailers and suppliers often have incomplete data, leading lead to costs within the supply chain.
- Benefits are anticipated in the following three main areas;
  - Reductions of cost in manual workarounds to source missing data and correct errors
  - Reduced shrinkage administrative costs
  - Reduction in lost consumer sales through shelf stock- outs
- Our data will be used to quantify the UK retailers and suppliers profit erosion and lost sales. A resulting white paper which assesses the impact and opportunities is scheduled for issue later in the year

Case study 3 Improved Distributor Management in Growth Markets



The Scope

- **30+ Factories**
- **45 Carrying & Forwarding Agents (C&FAs)**
- **5,000+ Distributors spread across the country**
- **1 million Retailers**
- **Distributors are remotely located and not able to remain online all time**
- **Huge amount of data needs to be handled**
- **High transaction monthly cycle**

Need for a distributor collaboration system

Case study 3 Improved Distributor Management in Growth Markets

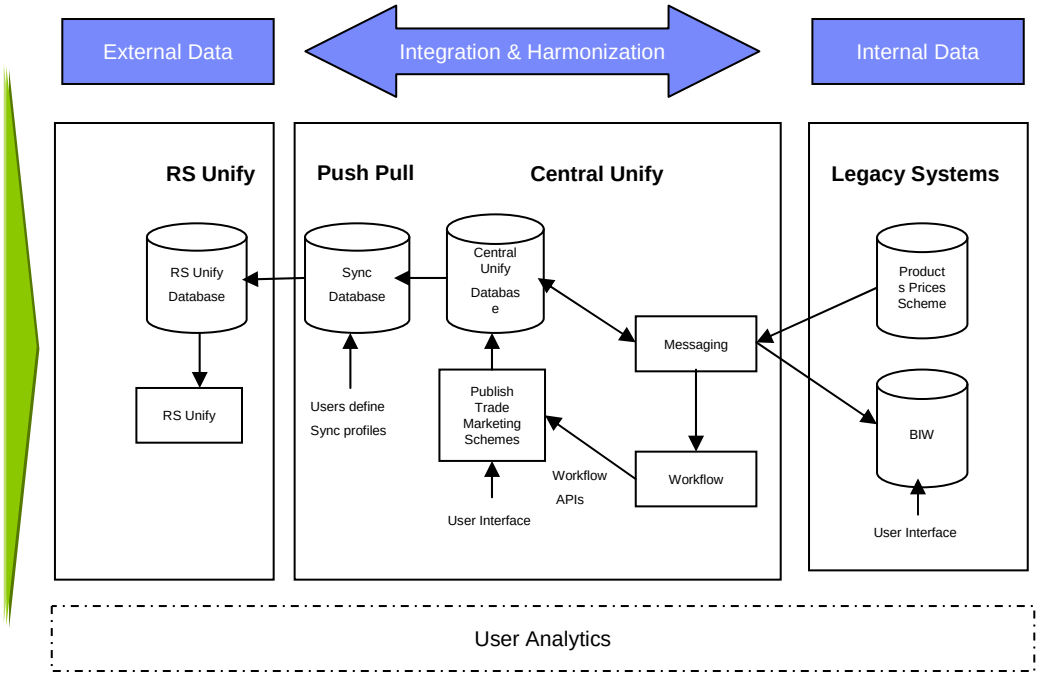
Objectives

- **Capture Secondary Sales – Accurately, In Detail and Without Phase Lag**
- **Ensuring price and TPM benefits reach the last link in the Chain – the Retailer**
- **Paperless office – Do away with cumbersome claim process**
- **Standardize Data structures**

Solution

- **Data is moved to “Push pull” synchronization engine from central database and the Distributor can sync and get updated schemes, price & SKU info**
- **The system is able to extract data from all Distributors and put it in a central system**
- **This data is then put into an extract and sent to SAP BIW system**

High Level Architecture



Case study 4 A common data strategy to enable multiple analytical solutions

Leaders are focused on two objectives

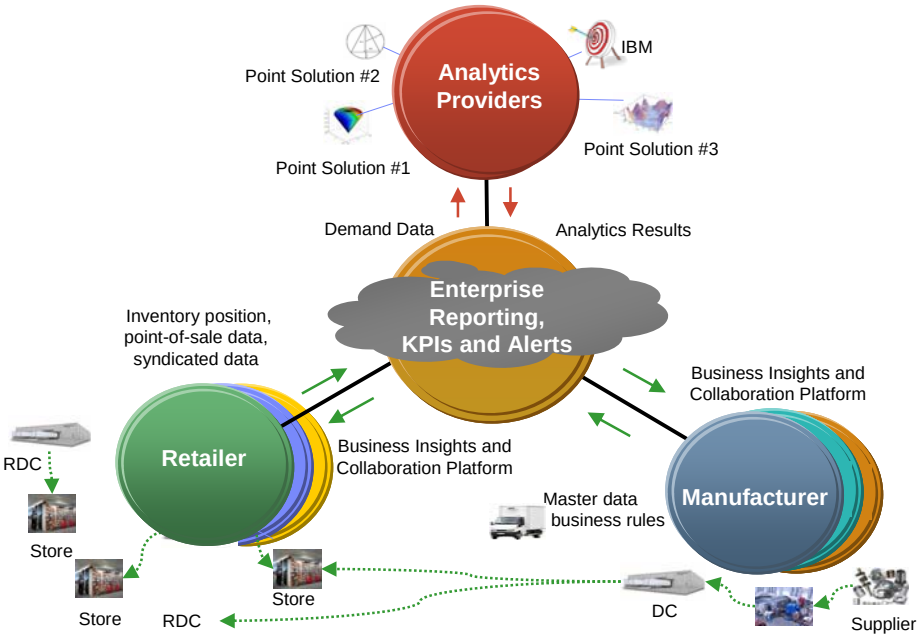
Leverage visibility from the shelf backward to fulfill existing demand

- Enhance forecasting, ordering and replenishment capabilities
- Improve on-shelf availability
- Optimize resources deployed to the shelf

Leverage visibility from the shelf backward to generate new demand

- Enhance demand management capabilities
- Better linkage between advertising, marketing, merchandising and coverage
- Respond to changing retailers, achieve business results and better manage cost structures

IBM is focused on enabling breakthrough



While the business value of Demand Driven Supply Chain initiatives is clear, the business case requires breakthrough thinking and development

Case study 4. Using analytics to create demand through consumer insights fulfilled by a demand driven repository

Analytics Providers

-IRI

-Nielsen

Analytics Results

Demand Data
Syndicated Data

Enterprise Reporting
KPIs, Alerts

Aggregate Data

Consumers

Insights and Collaboration Platform

- Demand/Supply Planning
- Category Management
- Promotion Planning

- Shopper Insights Analysis
- Dynamic Pricing
- POS Data

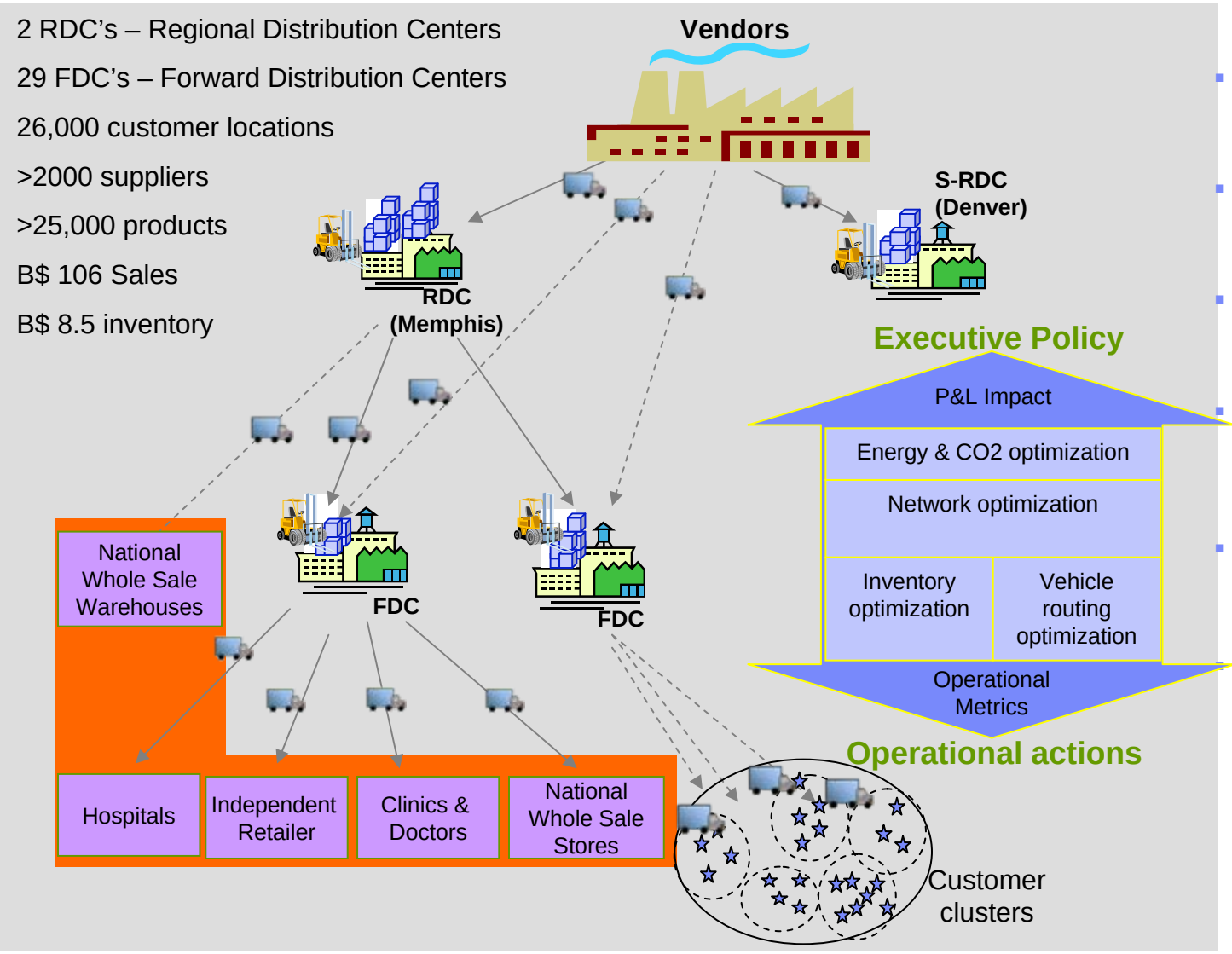
Insights

Master Data
Business Rules

Retailers

Bottlers

Case study 5 End to end visibility allows optimisation of Supply Chain, Costs and Carbon Footprint



Solution Objectives

- Link operational decisions to "Board Room" view (P&L impact estimation)
- Model sustainability in broader sense (operational, financial, environmental)
- Integrate key supply chain planning areas in one model (inventory, network, routing)
- Create an inventory of all energy using equipment and quantify energy use in relation to supply chain decisions
- Provide extensive "what-if" analysis to help establish cost effective sustainability policies
- Provide a user friendly web-based integrated dashboard

Several very different case studies, so there's no single right solution. Enabling technology falls into a number of groups

- Tools and sensors for real-time data capture

- Portals for the capture of suppliers' data

we supply™ OmPrompt™ Driving the Connected Enterprise one One Network Enterprises™

- Integration hubs for the creation of end-to-end visibility

- Optimisation tools that allow you to do something useful with the information

ILOG Changing the rules of business™

Summary: Supply Chain Visibility is on everyone's list of challenges, but no one has solved all the issues

- Visibility can be equally applicable to products, assets and people

Three Keys to success

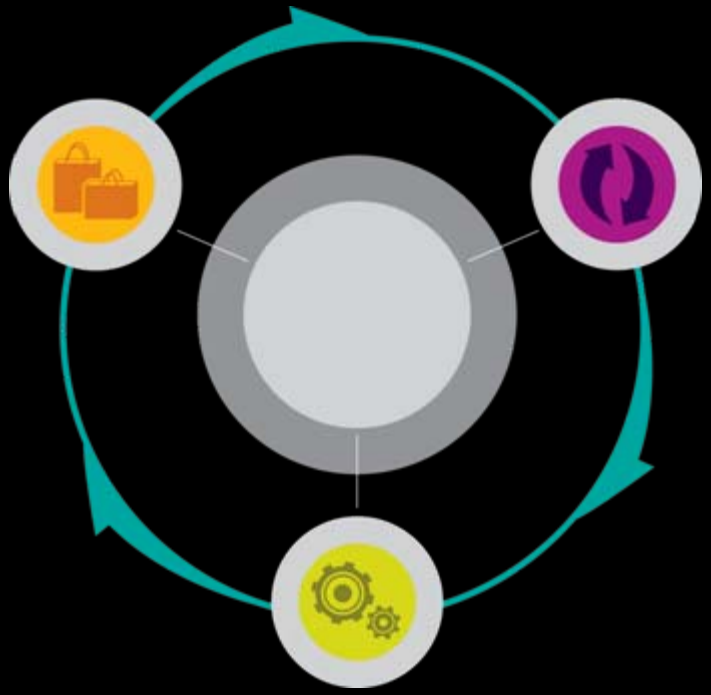
- **Rule 1:** Form the right collaborative relationships with your customers and suppliers.
- **Rule 2**: Visibility must be actionable.
- **Rule 3**: Work on those areas of your business that will give the greatest benefit

- It is not all about technology – but you need that too.
- There are many solutions out there. They should be selected and scaled to address the specific needs of your supply chain.

Questions

IBM Global Business Services

Thank You



Kennedy Information ranks IBM as a leader in supply chain consulting

KENNEDY Consulting Research & Advisory

AMR Research. SUPPLY CHAIN TOP25

2009	2008	2007
Apple	Apple	Nokia
Dell	Nokia	Apple
Procter & Gamble	Dell	Procter & Gamble
IBM	Procter & Gamble	IBM
Cisco Systems	IBM	Toyota Motor
Nokia	Wal-Mart Stores	Wal-Mart Stores
Wal-Mart Stores	Toyota Motor	Anheuser-Busch
Samsung Electronics	Cisco Systems	Tesco
PepsiCo	Samsung Electronics	Best Buy
Toyota Motor	Anheuser-Busch	Samsung Electronics
Schlumberger	PepsiCo	Cisco Systems
Johnson & Johnson	Tesco	Motorola
The Coca-Cola Company	The Coca-Cola Company	The Coca-Cola Company
Nike	Best Buy	Johnson & Johnson
Tesco	Nike	PepsiCo
Walt Disney	Sony Ericsson	Johnson Controls
Hewlett-Packard	Walt Disney	Texas Instruments
Texas Instruments	Hewlett-Packard	Nike
Lockheed Martin	Johnson & Johnson	Lowe's
Colgate Palmolive	Schlumberger	GlaxoSmithKline
Best Buy	Texas Instruments	Hewlett-Packard
Unilever	Lockheed Martin	Lockheed Martin
Publix Super Markets	Johnson Controls	Publix Super Markets
Sony Ericsson	Royal Ahold	Paccar
Intel	Publix Super Markets	AstraZeneca

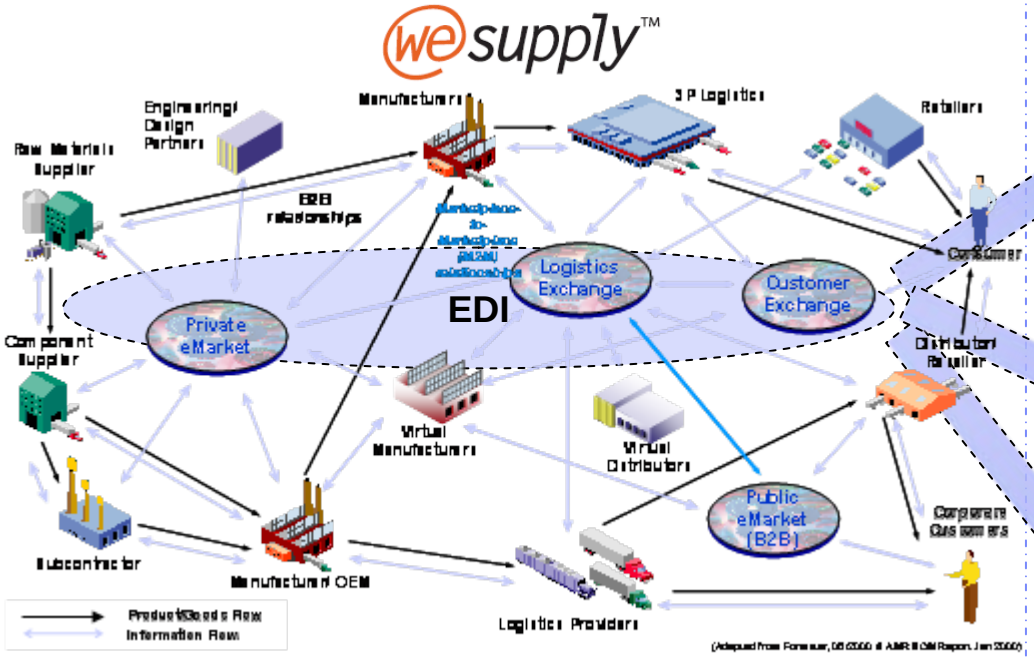
Collaboration & Supplier Integration

OUR PROPOSITION

Typical Exam Question

How can I better integrate with my suppliers to reduce time to order and improve every day interactions ?

Next gen EDI platform that analyses communications in real time, adds intelligent analysis and alerts to issues

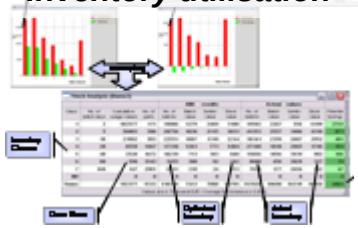


WebSphere. software **PORTAL**

Supplier Compliance

Order Lifecycle Management

Inventory utilisation



E.G

Sainsbury's SCREWFIX JEWSON Poundland

BENEFIT

PO to delivery **43%**

EDI costs **20-40%**

40%

Process productivity

OTIF **ATP** **Open2 Buy**

6 month implementation

SaaS, hosted & financed

Flexible Commercial models

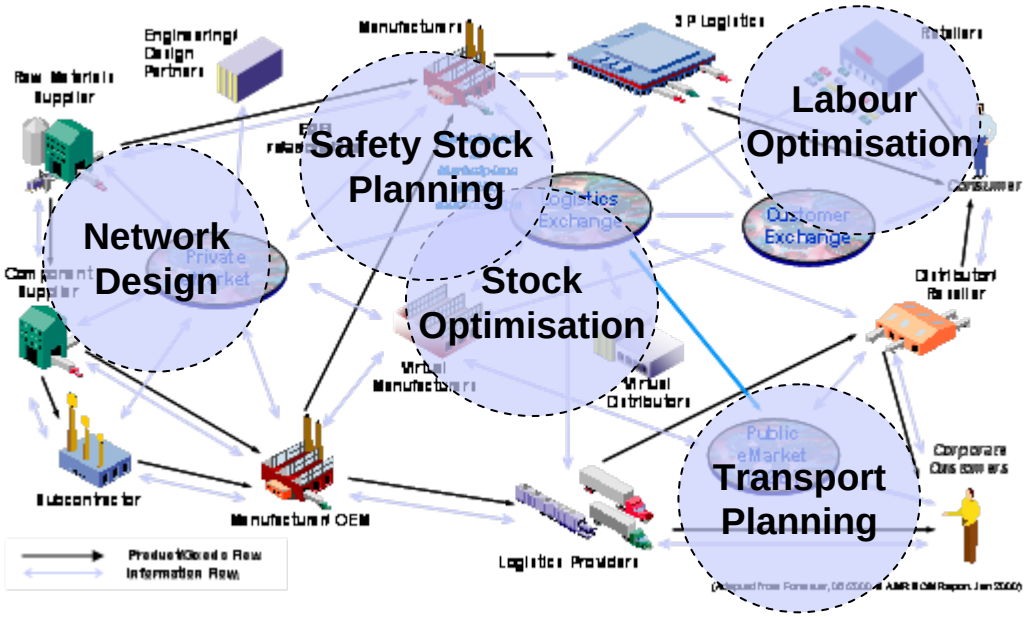
Supply Chain Transformation

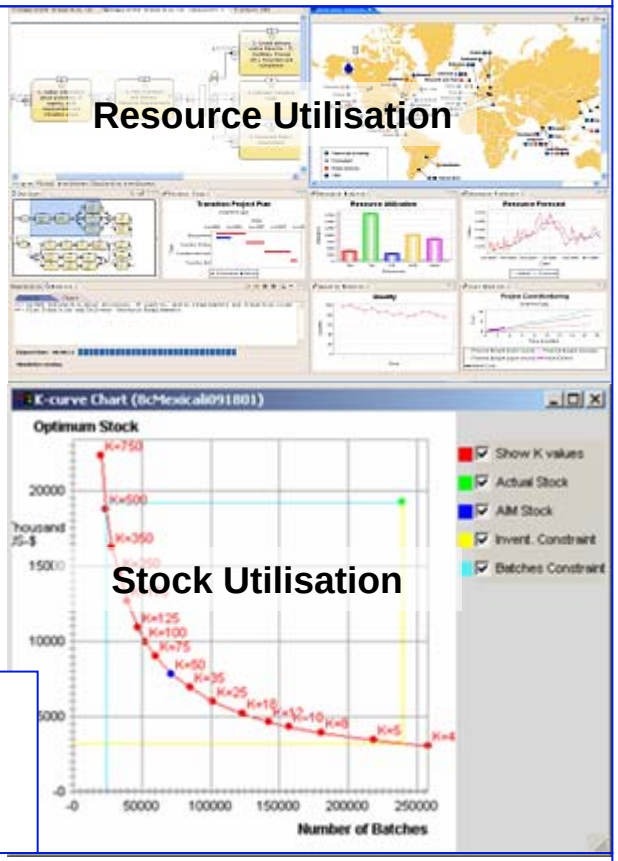
OUR PROPOSITION

Exam Question

How can I optimise my supply chain without making substantial infrastructure change

Use of intelligent algorithms proven in retail supply chains to improve utilisation of resources & stock holding





E.G

TIMKEN Where You Turn — **Transform to pull replen inc' safety stock setting**

ZARA — **Store Forecasting & Replen**

BENEFIT

Working capital **30%** *Stock holding* **2-3%**

Scheduling time

ILOG Changing the rules of business™

6 month implementation

Proof of concept

Business case based on mathematical evaluation

Intelligent Cost Reduction

Exam Question

I want to find a partner who can look at my complete business and identify large cost reduction opportunities

Financial review to identify areas of consolidation, improved process and outsourcing based on best practice

Our Proposition

Take 20-40% out of the targeted cost base
- Reduce costs in operations expenditure, both now and in the future

Improve cash flow
- Reduce working capital
- Disposals of underperforming or non strategic assets
- Use alternative sources of funding

Improve "control" over spending
- Improve quality & predictability in decisions
- Support globalisation of capabilities

Manage or improve service levels
- Strategic business alignment and service value focus
- Create or sustain capability to support new business ventures and products/services

***AND* re-align organisation and workforce**

PEPSICO — **$500m supply cost reduction**

AVIVA — **50% performance incr' in app development**

Trinity Mirror — **$40m savings from cross business cost reduction**

Offer & Assets

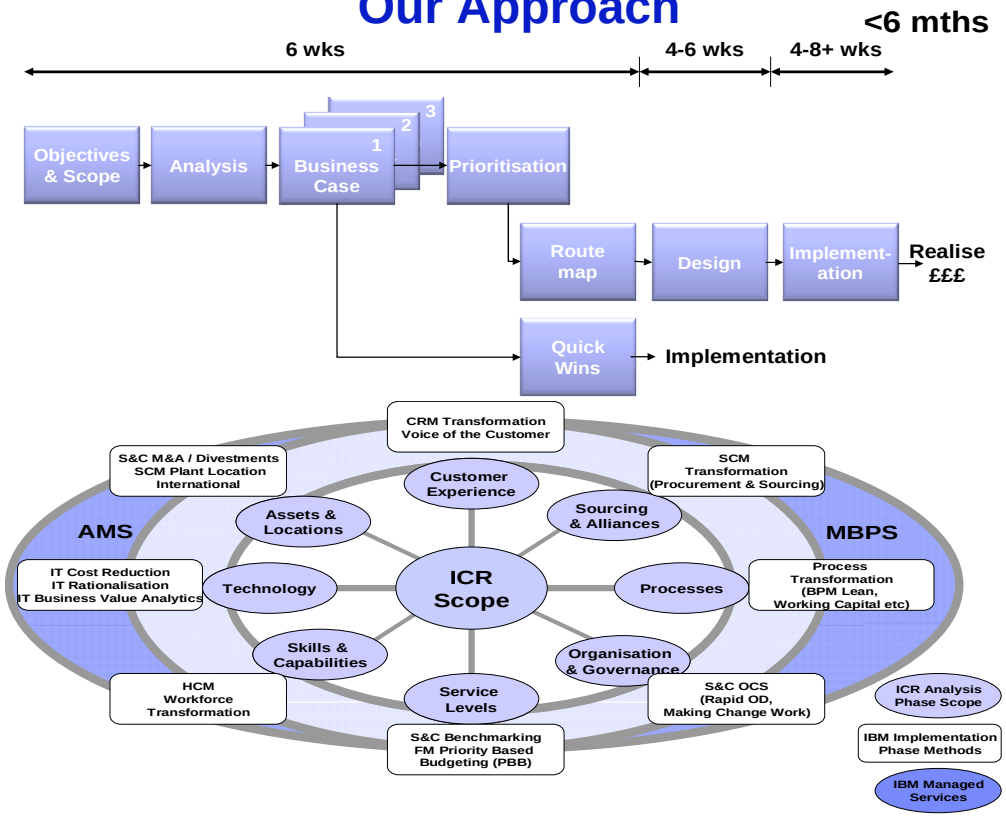
12 month payback

Commit to commercial outcomes

Flexible commercial models

ILOG COGNOS

Our Approach



Case study 4. A Global Oil Major wanting to track its tankers and improve control of delivery schedules

- If petrol station managers are allowed to order when they want to, the supply chain will never be optimal for the supplier
  - Peaks and troughs through the week caused by consumer demand and pricing fluctuations
  - Order volumes causing tankers to go out half full
- Integration between scheduling centres, terminals, trucks and customers assured robust planning and collaboration
  - petrol station managers know when deliveries will arrive, and can be ready
  - Schedulers can maximise the deliveries in a shift
  - Drivers can know whether tank space is going to be available to receive their loads

Case study 4. Solution technology includes sensors, communications infrastructure and optimisation systems

At customer site

Tank gauging

Modem

At scheduling

Service to poll data into central database database

Optimising / Scheduling system

Interface to ERP / other systems

Communication between truck and customer

On delivery vehicle

GPRS modem

In-Cab Touch PC
PC
In-Cab Software