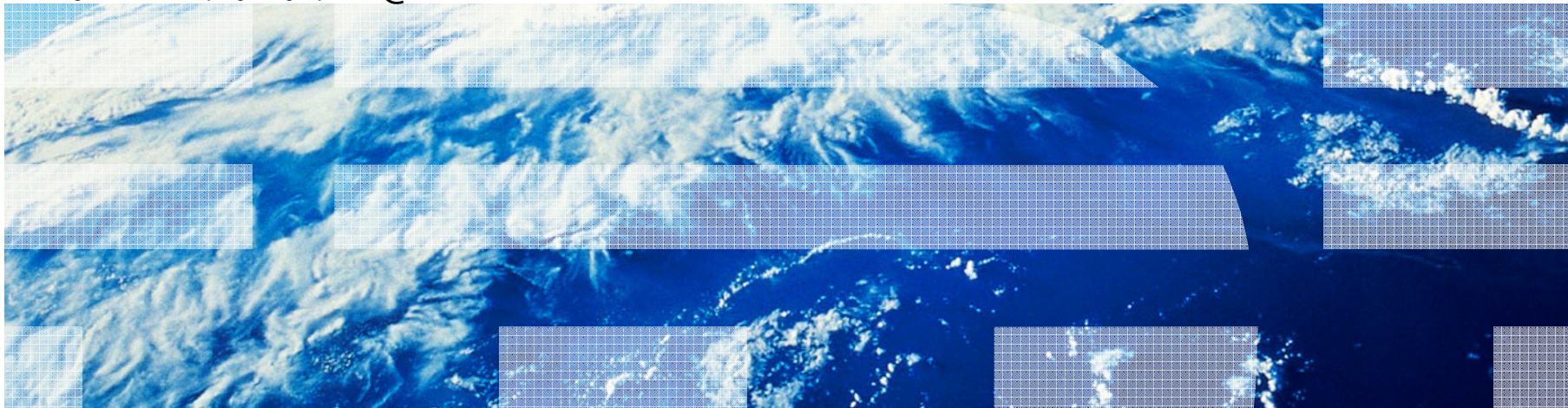


IBM Cognos TM1 Performance Management Solution

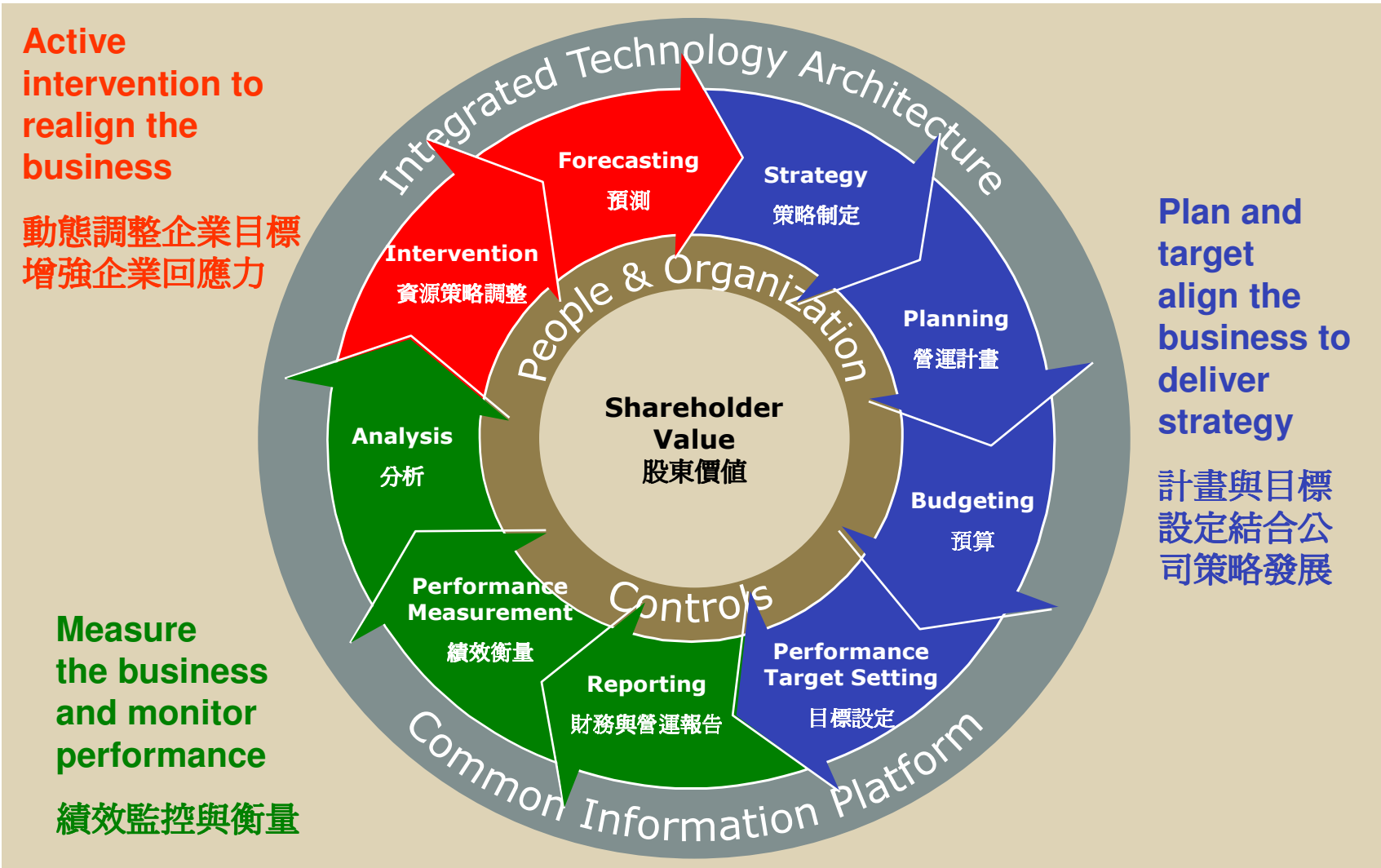
Brian Lin

Brian YL Lin/Taiwan/IBM@IBMTW



Business Analytics

高績效企業績效管理文化--回首過去&放眼未來



Reference by Deloitte, 2008 software

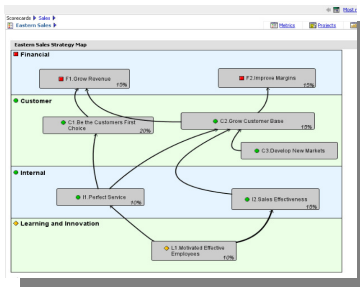
IBM 提供完整的績效管理解決方案以滿足企業之需求

績效管理(EIS)

- 動態報表分析
- 儀表板
- What-if
- KPI管理
- 戰情室

預算規劃系統

- 年度預算, 預測模型建立
- 預算功能輔助
- 模擬功能



策略管理(BSC)

- 平衡計分卡
- 風險管理
- 策略地圖
- 價值樹管理

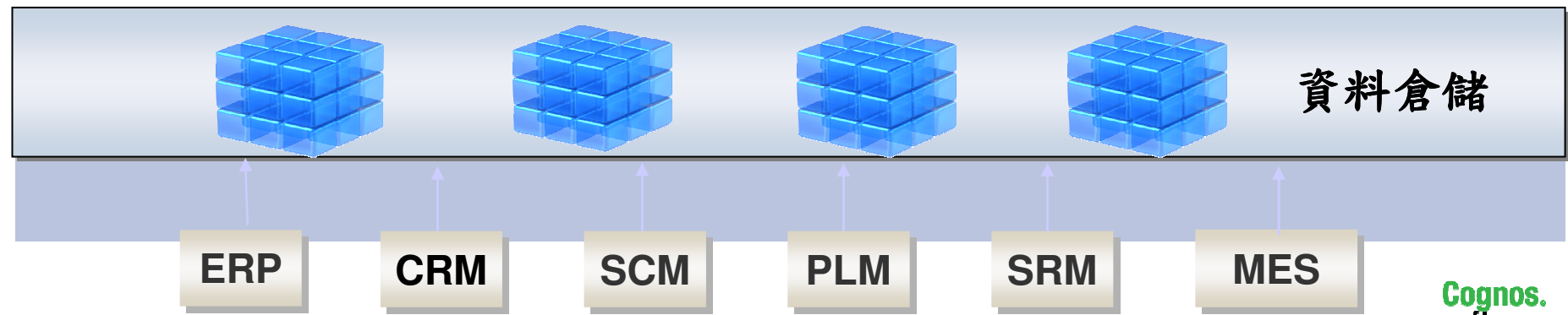
	Original Version	102	101	103	GAAP Version
Intangible Assets	46,230	0	0	0	46,230
Simple assets	3,426,244	0	0	0	3,426,244
Investments	0	0	0	0	0
Total assets	3,472,474	0	0	0	3,472,474
Trade receivables	20,374,000	0	1,000	0	20,375,000
Trade payables	4,354,137	0	1,000	1,000	4,356,137
Cap & Equip	327,087	0	0	0	327,087
Current assets	20,046,860	0	0	0	20,046,860
Current liabilities	34,476,264	0	0	1,000	34,477,264
NET CURRENT ASSETS	34,442,138	0	0	0	34,440,138
TOTAL ASSETS LESS CURRENT LIABILITIES	30,027,297	0	0	0	30,026,097
Share capital	1,424,527	0	0	0	1,424,527
Share premium	1,785,715	0	0	0	1,785,715
Capital reserves	1,089,416	0	0	0	1,089,416
Other reserves	723,439	0	0	0	723,439
Retained earnings	0	0	0	0	0
Profit and loss account	3,026,672	0	0	0	3,026,672
TOTAL EQUITY	33,237,864	0	0	0	33,237,864
Minority interests - equity	3,446,109	0	0	0	3,446,109
Minority interests - non equity	1,412	0	0	0	1,412
Capital and 3 years' total	10,762,241	0	0	0	10,762,241
Provisions	517,295	0	0	0	517,295
Minority interests - equity	3,446,109	0	0	0	3,446,109
US deferred tax balance	110,379	0	0	0	110,379
Deferred income tax balances	742,418	0	0	0	742,418
Total deferred tax balances	1,054,368	0	0	0	1,054,368
LIABILITIES	34,442,138	0	0	0	34,442,138

合併報表

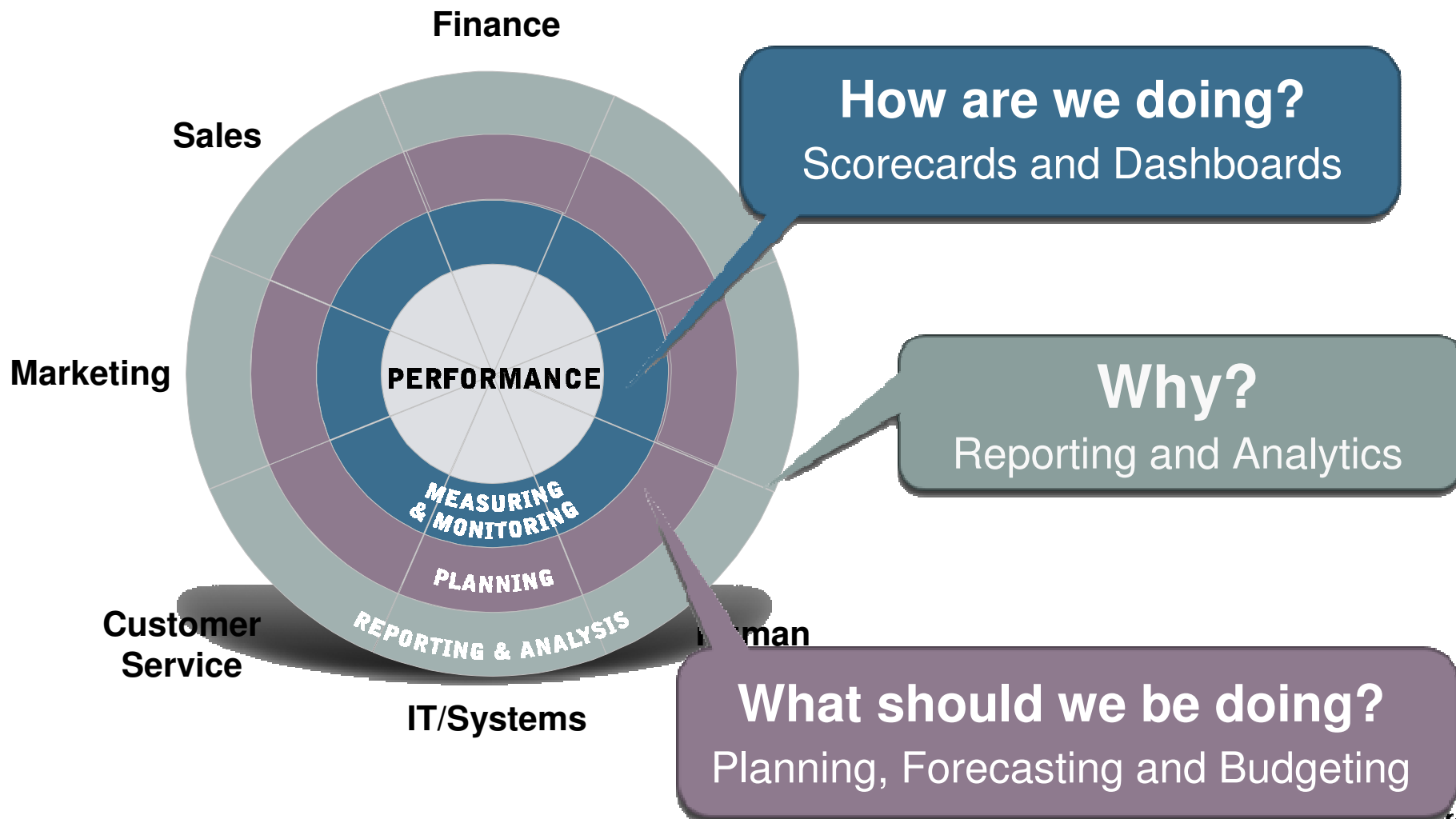
- 財會合併
- 管理合併
- 合併報表
- IFRS

客戶關係管理

- SPSS統計分析
- 行為預測分析
- 資料探勘分析

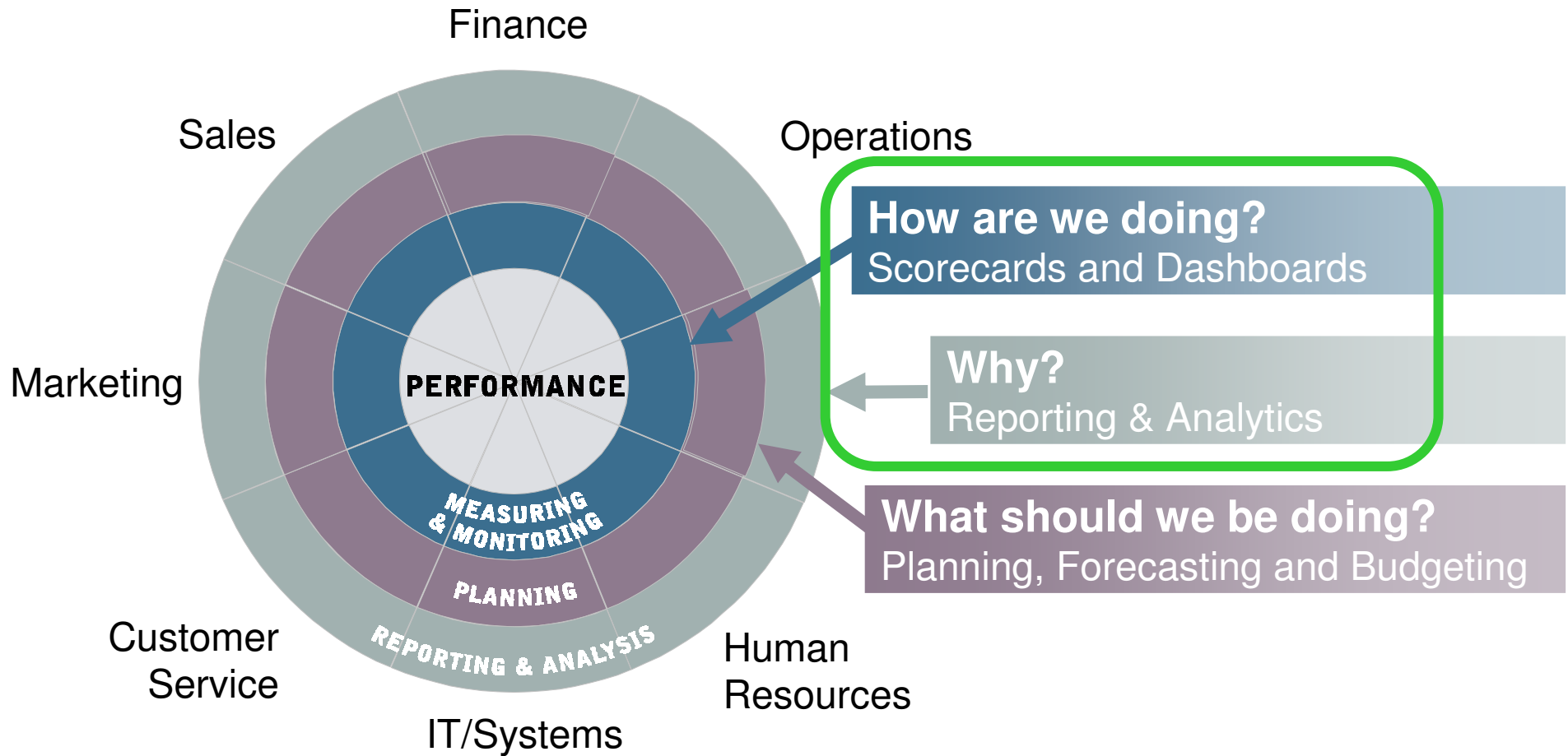


Three Key Questions That Advance Performance

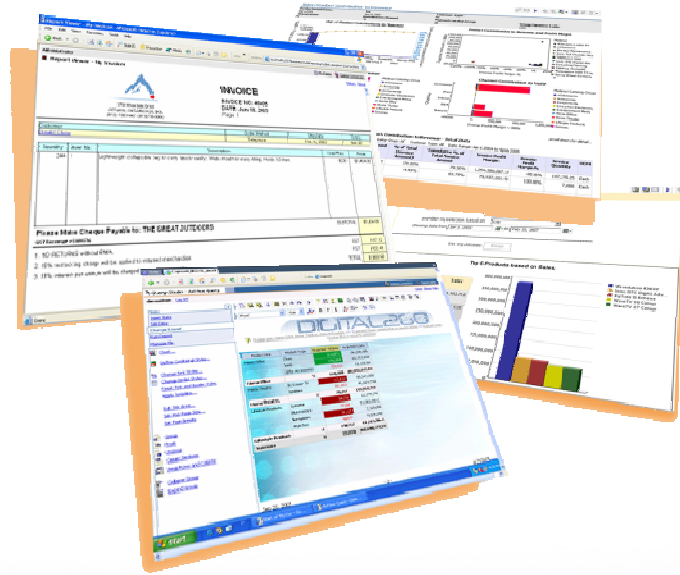


Business Intelligence

Answers two of three questions that drive better performance

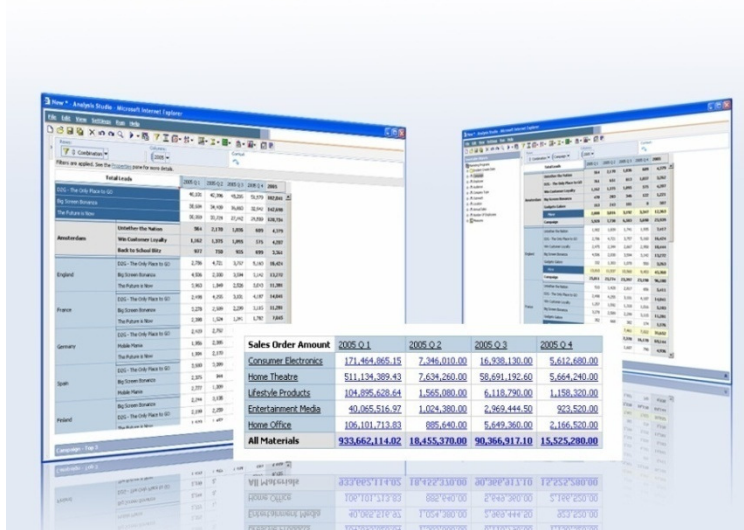


“Why?”



▪ Reporting- 滿足所有需求的報表工具

- 編寫製作商業管理報表報表、生產報表等各式報表及特殊資料查詢。
- 報表對應各種操作系統，例如 OLAP 及關聯資料。
- 報表可以各種形式呈現：Email、HTML、PDF、Microsoft Excel、CSV與XML。
- 令使用者可自製報表，減輕IT人員的資源負荷，並降低報表間轉換與連結的消耗。
- 支援 Unicode 及多國語言報表需求。



▪ Analysis- 輕鬆又完整的多維度分析機制

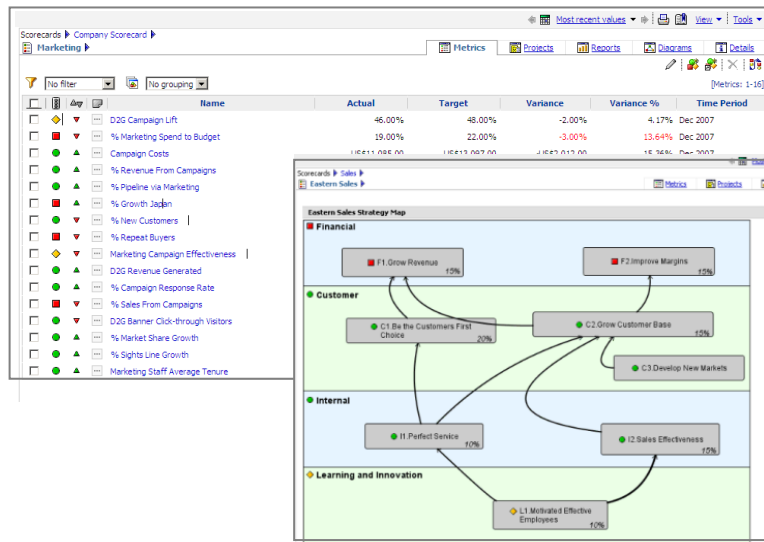
- 涵蓋全面的資料源，並可讓您在報表、指令及分析間快速地擷取並分析大量的資料源。
- 可利用 OLAP 及多維度報表來分析所有的資料。
- 深度比較的分析，可以直接點入、交叉剖析、排序及分類（例如時間、產品、客戶等維度）。
- 可用簡易上手的拖拉方式來選擇維度和篩選，分析大量及複雜的資料。

“How Are We Doing?”



Dashboard- 一圖表千語的企業儀表板

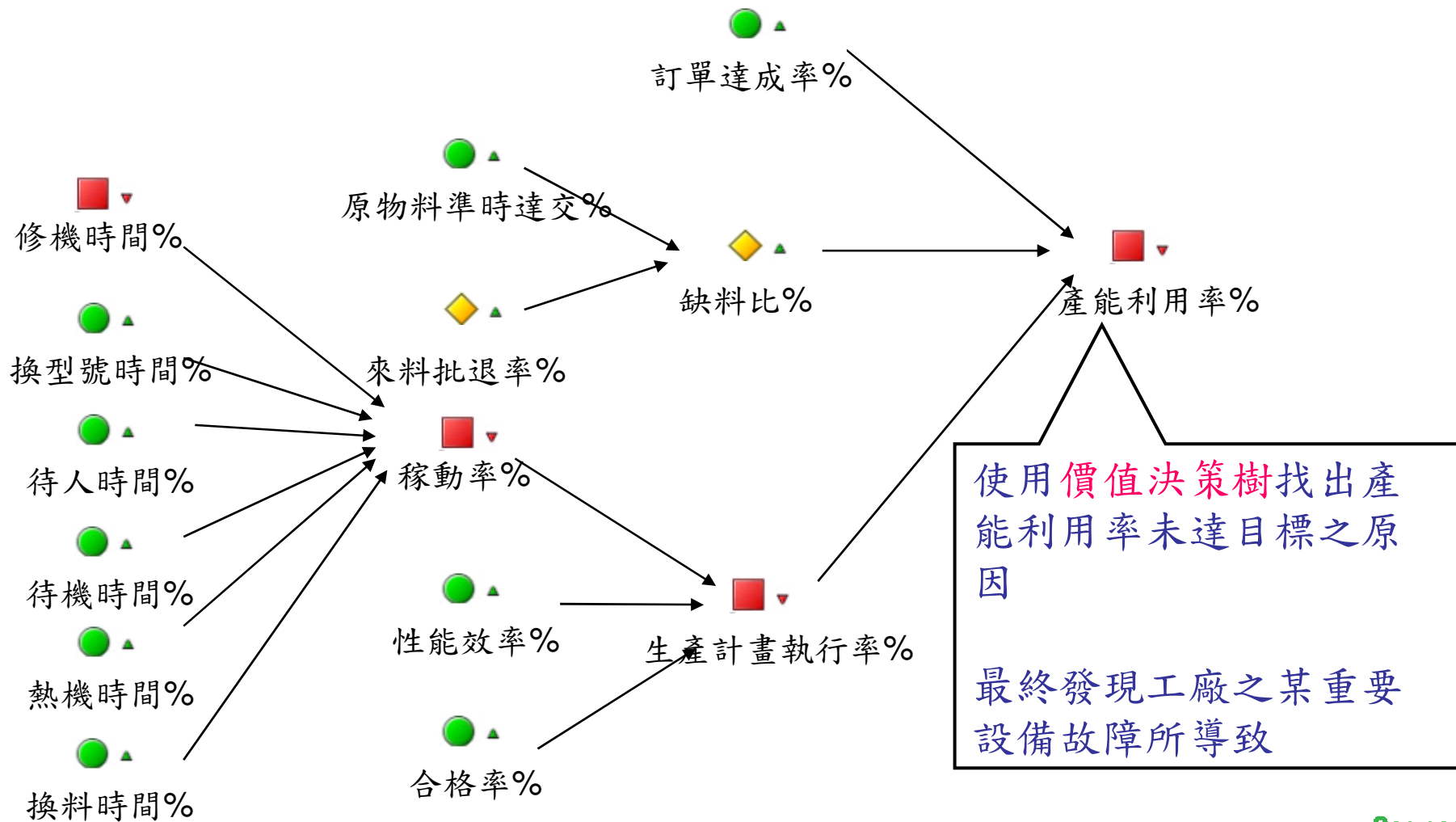
- 一目瞭然的企業績效管理。
- 經由各種圖表、報表、地圖等的明細資料，可讓您在最短的時間做出最正確的決策。
- 可針對個人需要製作專屬資訊中心，來監控組織績效。
- 儀表板元素所強調之重點資料可更進一步延伸分析。



Scorecard- 以計分卡來監控績效

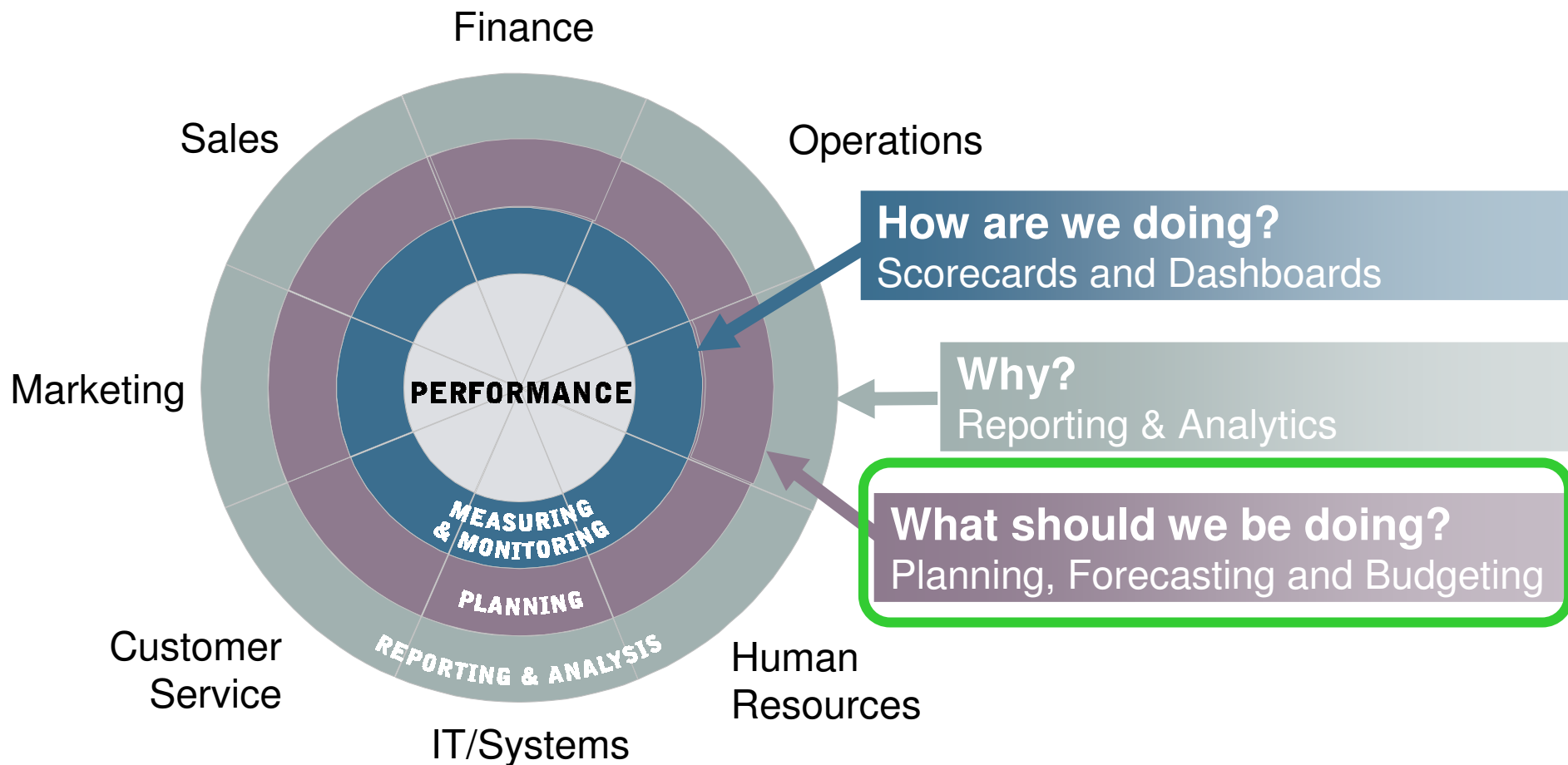
- 一眼就可掌握企業目標與執行績效的表現
- 完整呈現績效指標之間的關連
- 快速明瞭問題原因
- 連結報表與多維分析，確認績效明細
- 利用多指標資料來連結您的企業預算、整合企業績效管理

Root Cause?



Financial Performance Management

Answers one of three questions that drive better performance



Forecast and Demand Variability

Forecasts are typically a key input to your demand and supply chain operations processes.

As a general rule, **forecasts are always inaccurate.**

Over a Period of 6 years, AMR Research conducted 70 supply chain benchmarking studies, *forecast errors in the range of 11% to 28% are typical.*

Forecast accuracy (AMR Benchmark Analytix data)

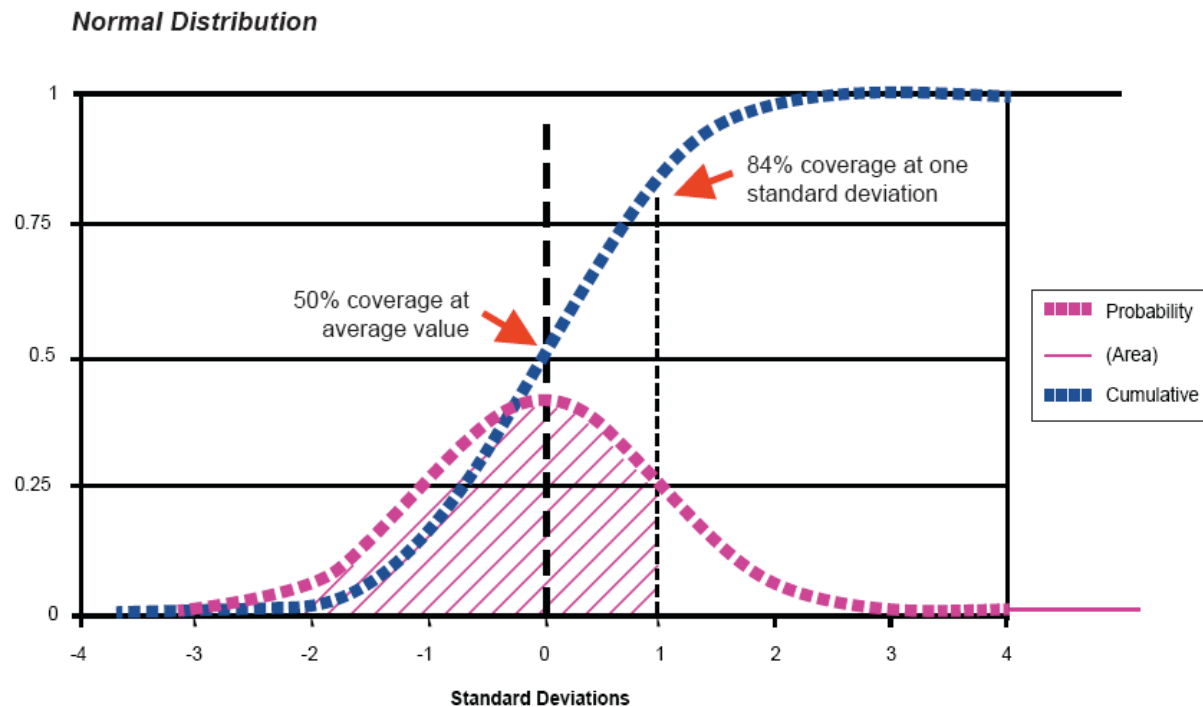
Forecast Error (MAPE) with One-Month Lag		
Industry	Range	Median
Bulk Chemical	24% to 10%	11%
Consumer Goods	40% to 14%	26%
High-Tech	45% to 4%	28%

Forecast Error and Inventory

The Challenge:

Your challenge is to provide a quantity of supply to satisfy your demand in a given period. Think of your supply strategy as a combination of:

- “cycle stock” (supply for the expected demand in the current period)
- “buffer stock” (additional supply to cover the statistical variability in your demand)



Improving Forecast Accuracy

Collaborative Forecasting:

Collecting and reconciling information from within and outside the organization to come up with a single projection of demand.

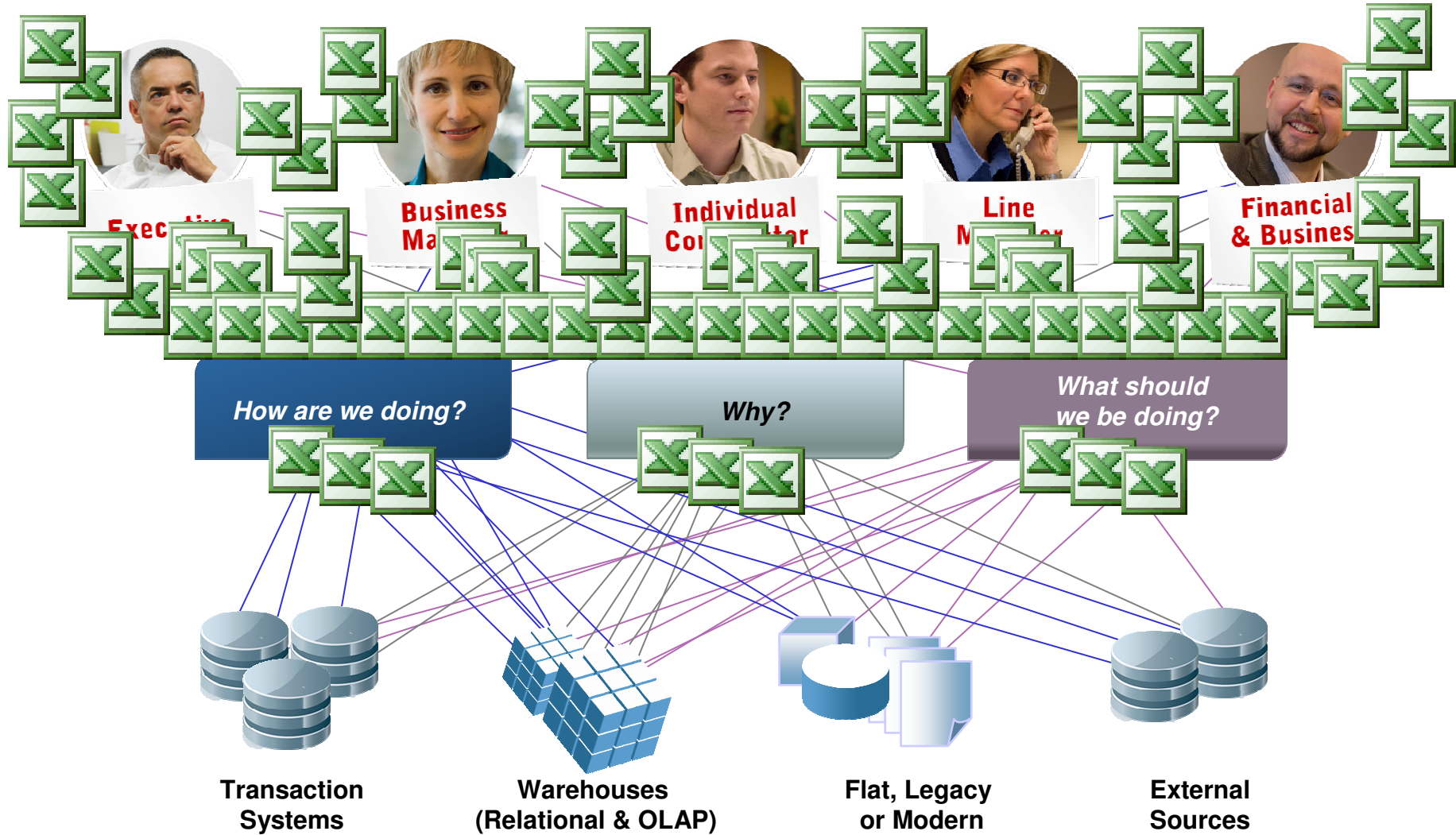
Competing Factors:

- ▶ **Historical demand**
 - ▶ Including trends, similar products, and seasonality
- ▶ **Macro and micro economic trends**
- ▶ **New product introductions and competitor activity**
- ▶ **Unique insight and judgment of demand and supply chain planning participants**

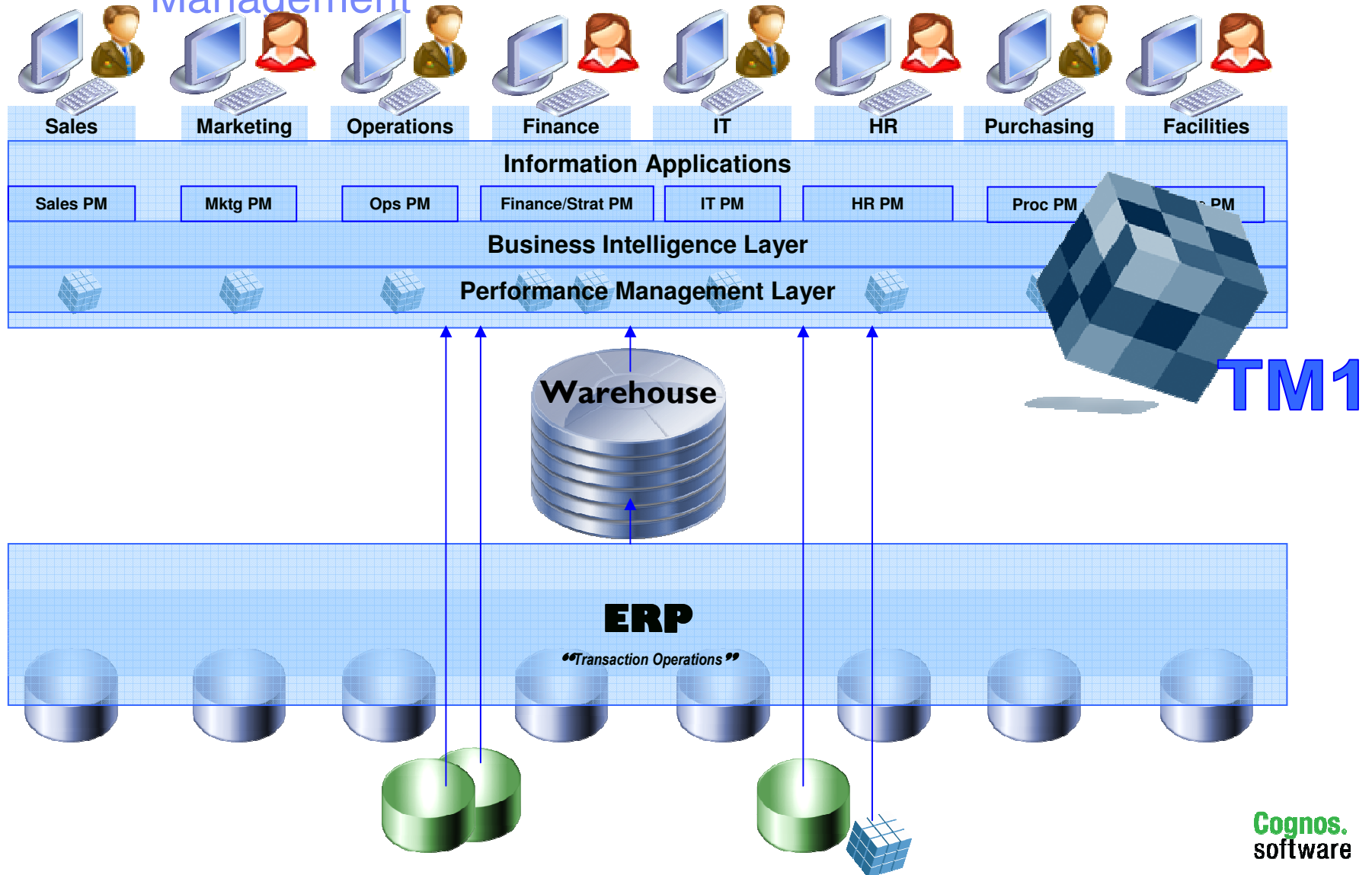
Typical forecasting process inputs:

- ▶ **Sales forecasts**
- ▶ **Customers forecasts**
- ▶ **Actual demand by using historical data to predict future demand**
- ▶ **Marketing forecasts and economic trends**

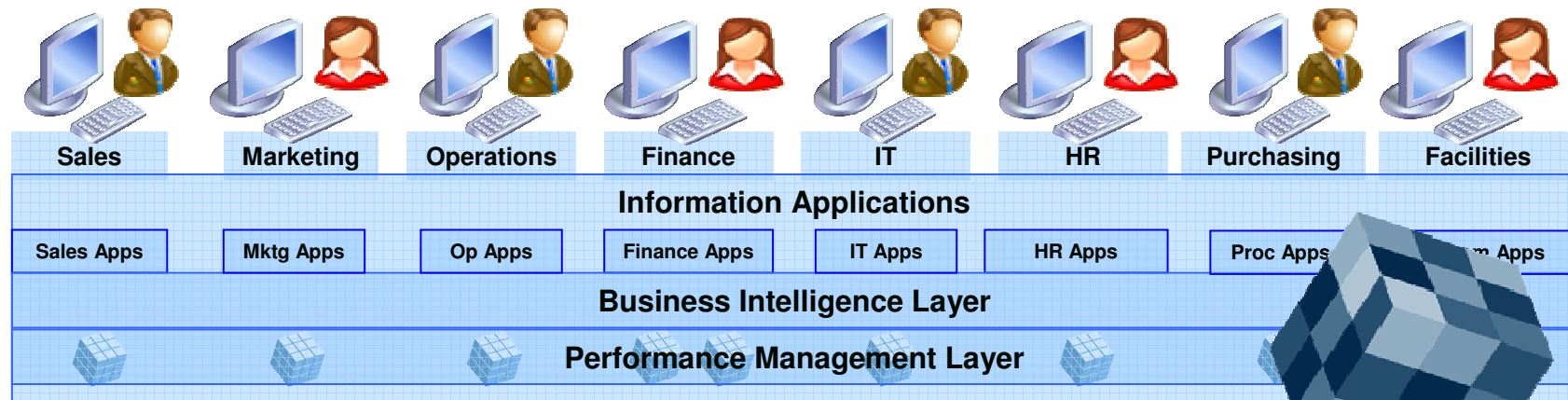
Performance Management: how decisions are made



How TM1 Delivers the Single Platform of Performance Management



What Makes TM1 Unique for Performance Management



- **Linked Cubes:** sharing data and rules across organisation
- **Fast:** Real-time data collection/calculations, real-time updates
- **Flexibility:** complete control over front end look and functionality
- **Ease of Use:** Business User owned and maintained
- **Multiple Access & Interfaces:** all users catered for
- **Scalability:** huge data volumes, no speed compromise
- **Best Business Intelligence:** Cognos BI fully integrated
- **Largest R&D of All PM Venders:** security & investment of IBM

-- Without all these, users go back to spreadsheets!

Frequently Forecast, Rapidly React

The statistics shows the standard deviation over several (M) periods depends upon the number of periods:

Standard deviation over M periods = \sqrt{M} * (standard deviation in one period)

	Daily	Weekly	Monthly
Days in Cycle	1	5	22
Buffer Stock, as % of average daily demand, required for same service level 10% (assuming standard deviation for 1 day)	10%	22.4%	46.9%

Activity	Typical	Target
	Days	
Collecting Forecast (Customers, Marketing, Sales, etc.)	10	2
Consolidation	2	0
Comparison & Analysis	5	2
Rationalization & Review	5	1
Total	22	5

What is an inventory reduction of 51.5% (64.0 – 12.5) of your average daily demand worth to your organization?

By changing your forecast review and replenishment cycle from monthly to weekly, you could reduce your required buffer stock from 64% of your average daily demand to 12.5% (corresponding to a 40% standard deviation in monthly buckets)

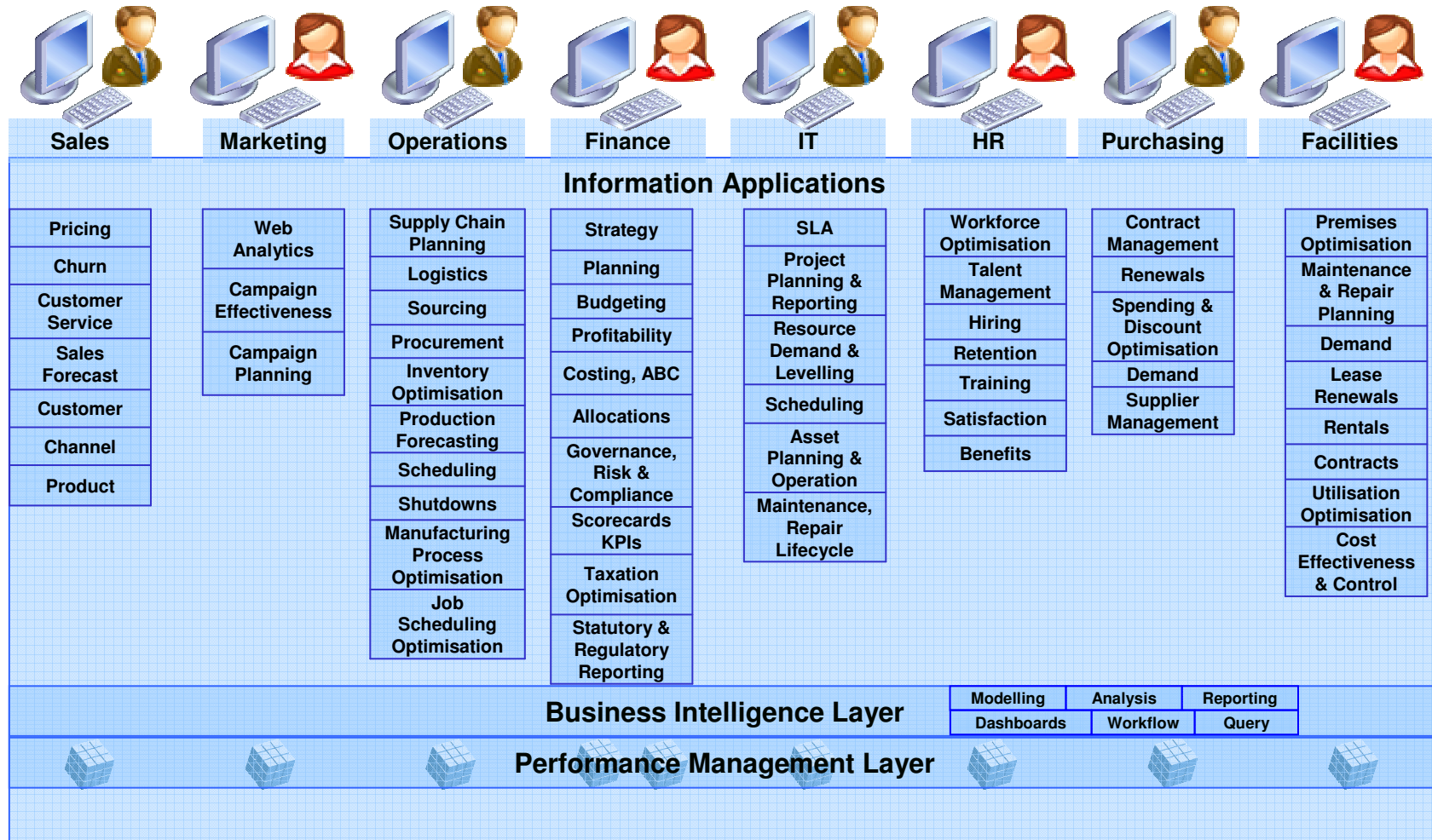
Demand Forecast Collaboration Platform

The screenshot displays the Cognos Business Analytics interface with several key components:

- Top Panel:** Navigation tabs for Demand Plan, Revenue Plan, Expense Line Items, Phased Costs, Capital Input, Operating Expenses, and Income Statement.
- Main Data Area:** A grid showing demand forecast data for various products (DVD Video, CD Audio, Software, PDAs, Computers, MP3 Players, Speakers, Receivers, Big Screen TVs) across months (Jan to Dec) and quarters (Q1 to Q4). The data includes units sold and revenue.
- Left Panel:** A bar chart showing demand for January, with a scale from 0 to 20,000.
- Bottom Panel:** An Income Statement table showing financial metrics such as Gross Revenue, Cost of Sales, Salaries, Payroll, Office Expense, and Travel, broken down by quarter and year.
- Right Panel:** A 'Select a Reference Cell' dialog box with a table of dimensions and element names. A yellow callout bubble points to this area with the text: "Ability to emulate historical data or trends directly in anywhere in the database with one-click (at isolated level or element level) for more flexible analysis and forecasting".

Account	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Q1	Q2	Q3	Q4
4999 Gross Revenue	8,496,686	6,957,505	6,959,006	8,749,005	8,586,107	8,022,691	7,867,666	8,213,283	7,977,159	8,474,450	8,749,887	8,835,746	97,889,211	22,413,197	25,357,803	24,058,128	26,060,083
5999 Cost of Sales	3,893,730	3,173,340	3,154,196	3,980,501	3,878,977	3,650,111	3,550,140	3,699,484	3,580,082	3,806,003	3,916,283	4,138,636	44,421,483	10,221,266	11,509,589	10,820,706	11,860,922
Gross Margin	4,602,956	3,784,165	3,804,810	4,768,504	4,707,130	4,372,580	4,317,546	4,513,799	4,397,077	4,668,447	4,833,604	4,697,110	53,467,728	12,191,931	13,848,214	13,237,422	14,199,161
6000 Salaries	37,383	38,083	42,870	42,870	42,870	42,870	42,870	42,870	42,870	43,109	43,109	43,109	504,946	118,345	128,637	128,637	129,327
6010 Benefits	5,234	5,332	6,003	6,003	6,003	6,003	6,003	6,003	6,003	6,035	6,035	6,035	70,692	16,969	18,009	18,009	18,105
6020 Cell Phones	950	950	995	995	995	995	995	995	995	995	995	995	11,890	2,895	2,895	2,895	2,895
6099 PAYROLL	43,567	44,365	49,877	49,877	49,877	49,877	49,877	49,877	49,877	50,139	50,139	50,139	587,488	137,809	149,631	150,417	150,417
6199 OFFICE EXPENSE	22,702	23,014	26,414	23,014	23,014	23,014	23,014	23,014	23,014	26,414	23,014	23,014	289,455	72,130	72,442	72,442	72,442
6299 TRAVEL	47,096	46,903	53,503	46,903	53,503	46,903	53,503	46,903	53,503	53,503	53,503	53,503	589,928	147,309	147,309	147,309	147,309
	29,263	29,263	30,224	29,263	29,263	30,224	29,263	29,263	30,224	29,263	29,263	30,224	355,000	88,750	88,750	88,750	88,750

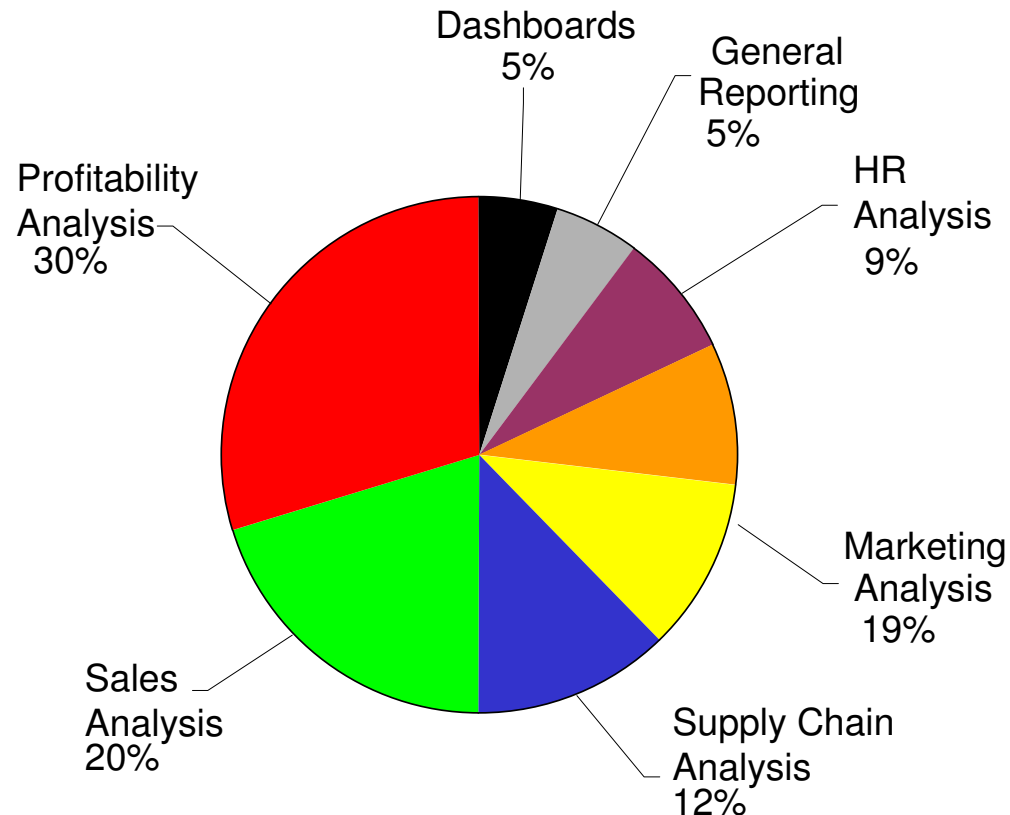
TM1 Information Applications – 1000s of solutions



TM1 Can work for Many Industries

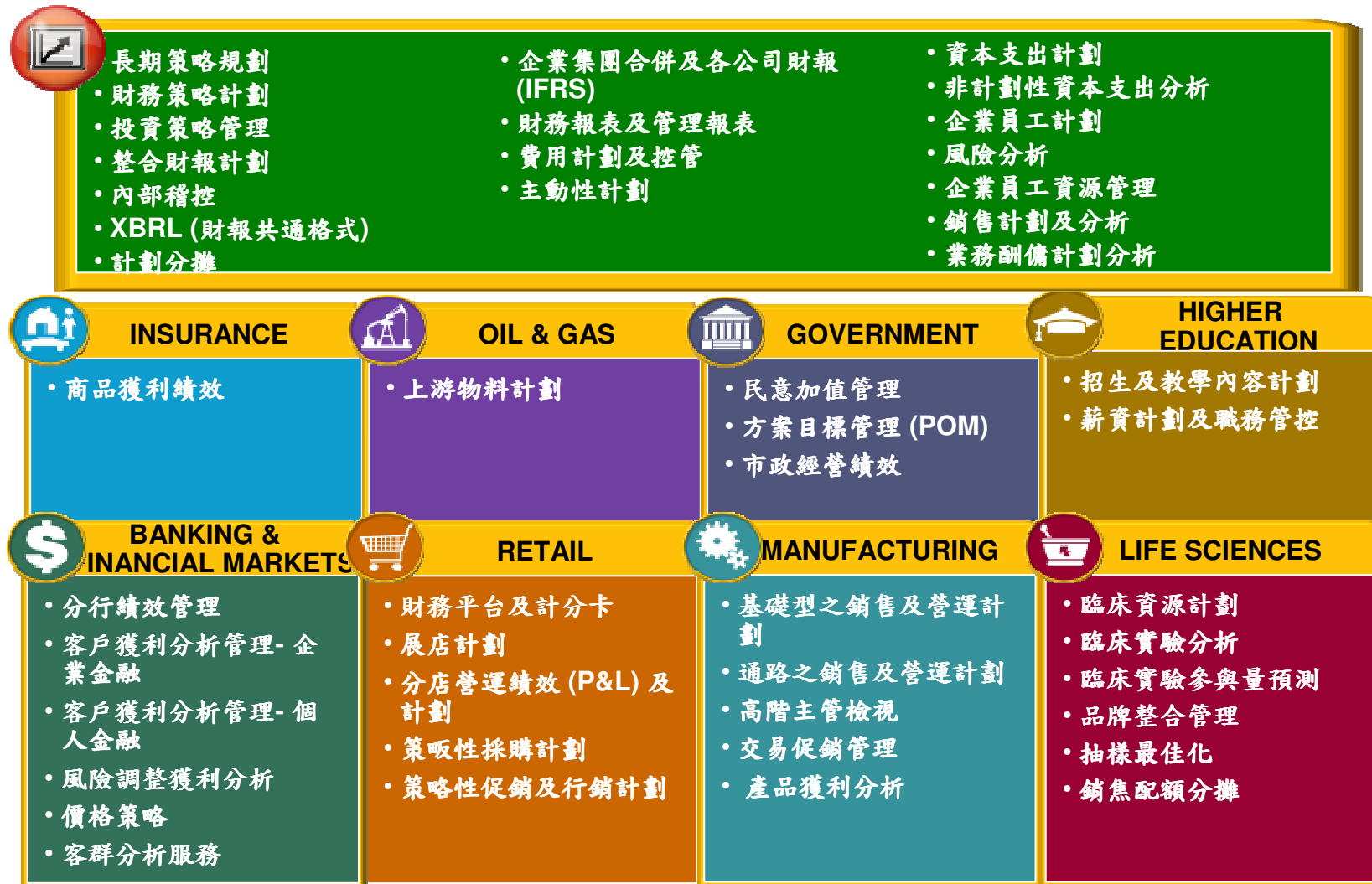
Manufacturing	<ul style="list-style-type: none"> • Sales Analytics • Product Profitability Analytics, Bookings Billings Backlogs • BOM Costing & Pricing • Price Volume, Mix Analysis • Plant Throughput • Capacity Planning • Warranty Tracking • Engineering Profitability • Procurement • Yield Analysis
Financial Services	<ul style="list-style-type: none"> • Loan run-off • Delinquency and charge off • Interest rate shocks • Transfer pricing • Credit card portfolio profitability • Roll rates • Loan Volumes • Customer retention analysis • Branch profitability
Retail	<ul style="list-style-type: none"> • Store analysis • Merchandize planning • Store planning • SKU level demand planning • Inventory Management • Promotion analysis • Vendor Analysis
CPG	<ul style="list-style-type: none"> • Brand Planning • Deductions • Coupons • Surveys • Inventory Management • Advertising effectiveness • Trade promotion
Transportation	<ul style="list-style-type: none"> • Route analysis • Equipment tracking and usage • Miles logged • Equipment efficiency • On-time delivery reporting •
Insurance/Healthcare	<ul style="list-style-type: none"> • Patient profitability • Clinic Profitability • Claims Reporting and analysis • Customer retention
Telecom	<ul style="list-style-type: none"> • Activations, Deactivations • Churn • Line profitability • Capital planning • Customer penetration • Network traffic planning
Energy	<ul style="list-style-type: none"> • Pricing and demand modeling • Supply and reserve modeling • Downtime analysis • Revenue capacity • Supply/Demand analysis

TM1 Can work for Many LOBs



- **獲利分析** – Product, Customer, Service, Channel, etc
- **銷售分析** – Pipeline/Forecasting, Territory/Rep Performance, Compensation Modeling
- **供應鏈分析** – Inventory Management, Supplier Analysis, Production Planning, Yield/Defect, Distribution/Routing
- **營運分析** – Segmentation, Campaign Effectiveness, Customer Churn, Life Time Value
- **人力資源分析** – Headcount Reporting, Turnover/Retention Analysis, Labor Utilization
- **一般性報表** – Data Warehouse, Transactional Systems
- **績效儀表板** – Spanning departments, geographies or business units

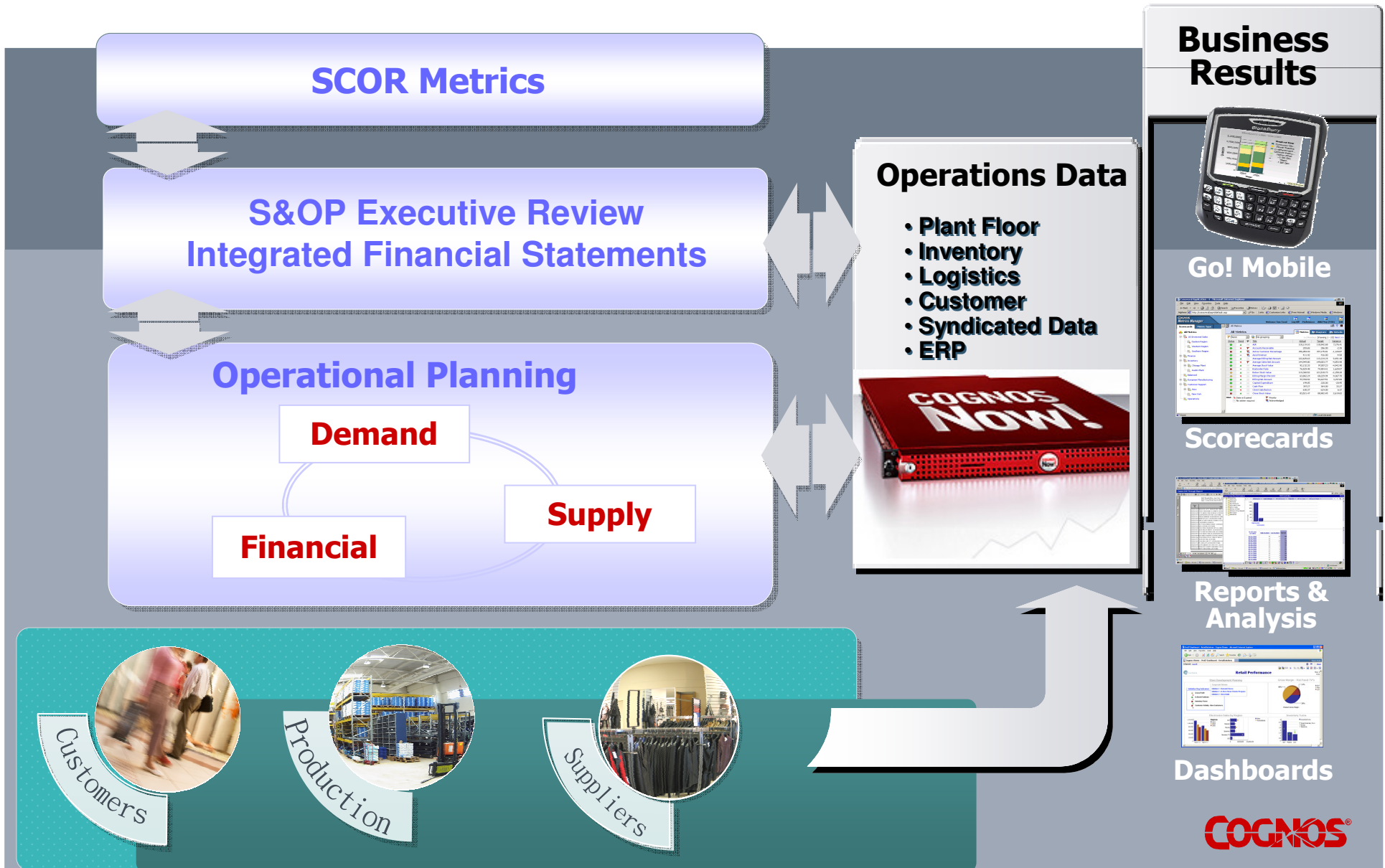
IBM Cognos Blueprints –不同產業特性解決方案範本



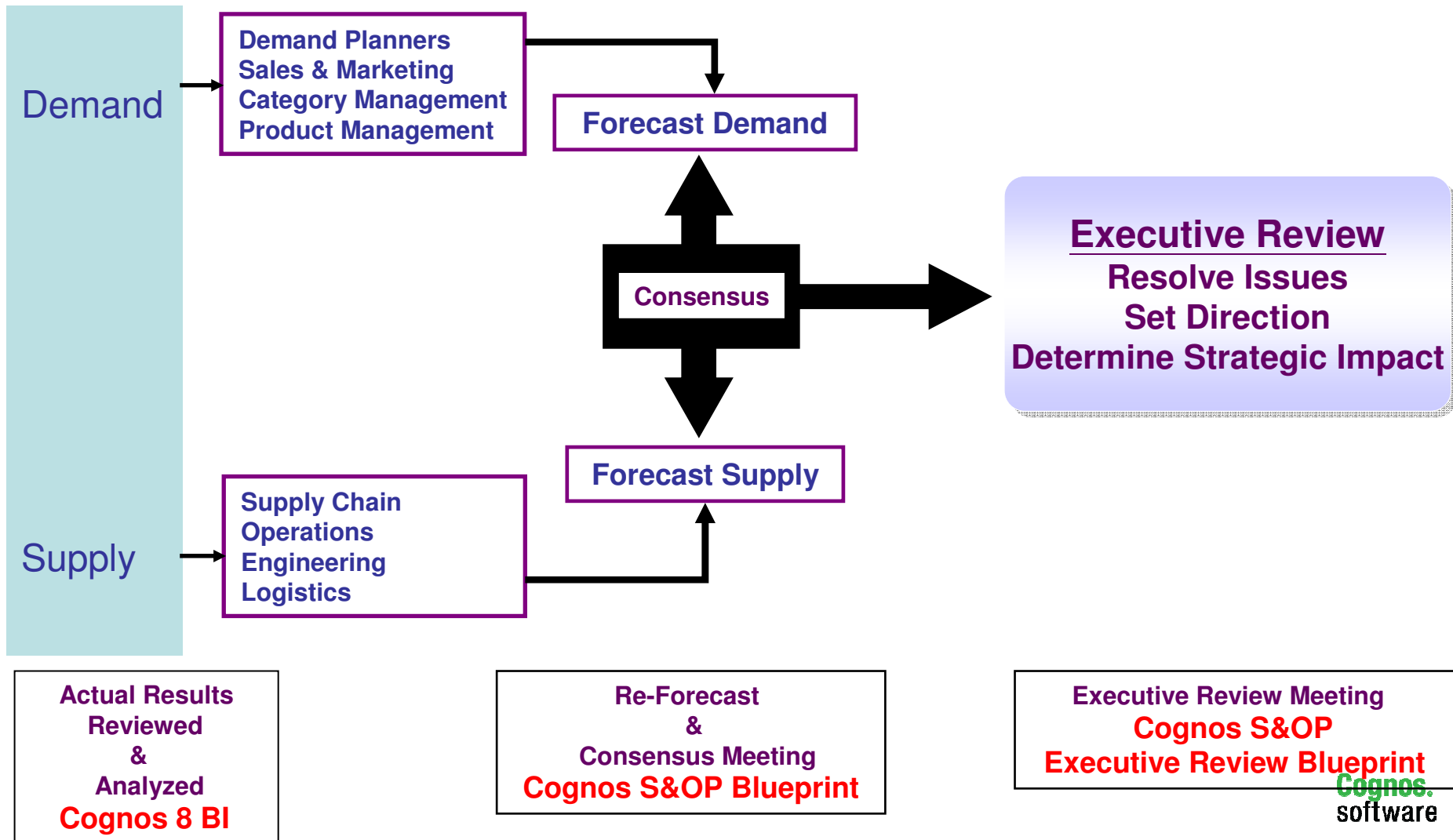
This represents current product plans and strategy that are subject to change. All release dates and capabilities are subject to the [Disclosure](#)

Cognos.
software

Manufacturing Performance Management Framework



S&OP Process Enabled by Cognos



New Product Profitability Blueprint

The IBM Cognos Solution

Optimize business decisions based on insight gained from product profitability

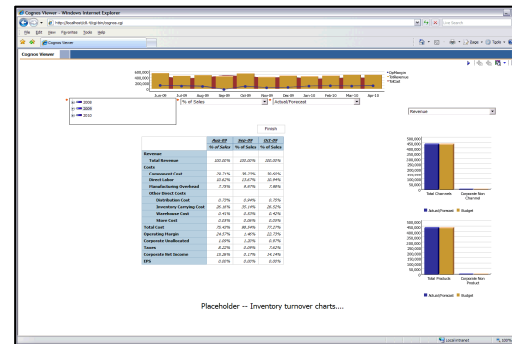
- **Product Attributes** (e.g., profit maximization across color, size, style (retail garments))
- **Inventory** (e.g., optimizing inventory management in the context of profitable products (hi-tech manufacturing))
- **Seasonal Trends** (e.g., profit maximization across fashion trends (retail), ad-hoc purchase trends (industrial supplies))
- **Channels** (e.g., profit based product-channel distribution mix (retail banking and insurance))
- **Vendors** (e.g., profit based vendor-input mix (health care))
- **Input Cost Allocation** — “what-if” analysis on the impact of input costs on product level profitability
- **Commit** – Ability to product level profitability to planning

Who is the Customer?

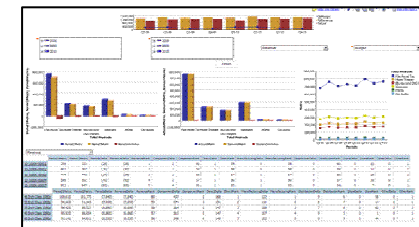
- Alfred Angelo (AA) one of the largest wedding gown manufacturer and retailer worldwide
- IBM Cognos TM1 customer with financial planning and consolidation solution built by Breakaway Technologies (partner).

alfred angelo

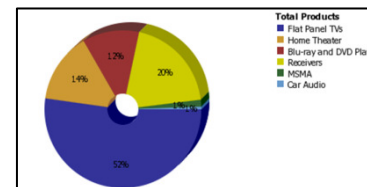
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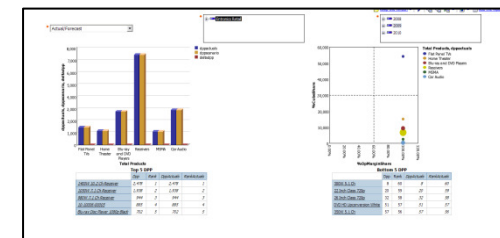
CFO – Product Profitability Impact



Direct Product Profitability



Inventory Mix



Product Profit View

Other TM1 Blueprints Coming Soon

- **IT Cost Transparency** - provide more granular understanding of shared service centre/ cost concentrations and ability to allocate costs more accurately to profit centres
- **Risk Modelling** – Operational, Credit Risk Modelling, What-if, Scenario Analysis, etc
- **Demand Planning** – SKU Level Demand Planning
- **Assortment Management** – SKU Level Planning



A Few of the 4500 Global TM1 Customers



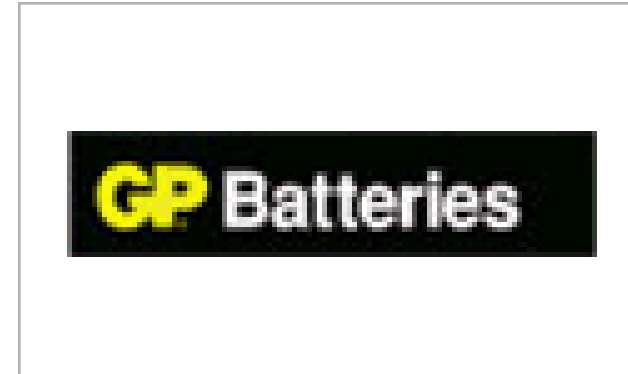
成功案例 : GP Batteries

Key Business Requirement

Budgeting, forecasting as well as inventory on cumbersome spreadsheets

Approach

Implement technology to automate an otherwise manually-intensive process



Challenge	Solution	Results
<ul style="list-style-type: none"> ▪ Budgeting, forecasting as well as inventory on cumbersome spreadsheets ▪ Planning not integrated across business units ▪ Limited reporting 	<p>Cognos TM1 Planning and BI :</p> <ul style="list-style-type: none"> ▪ Real-time insight into sales in 100s of stores, enabling trend spotting against business environment as key to forward-looking business strategy ▪ Pre-emptive action against suppliers' orders ▪ Swift, integrated planning, budgeting, forecasting, reporting ▪ Reporting by any needed variables: product, store, weekly fluctuations 	<p><i>“This is a powerful business asset and its implementation has saved Thresher Group man-power and as a result, revenue.”</i></p>

Real-time Customer/Channel/Product profitability



BACKGROUND

- Major Telecommunications & Network provider: 2nd largest GSM operator in Indonesia
- Dual listed in Jakarta & NYSE
- Provides fixed, mobile (GSM, 3G, CDMA) , IP broadband & internet services

TM1 SOLUTION

- Very large profitability solution:
 - 340 KPI's
 - 80 Dimensions
 - 36,000,000+ customers
 - A single 64bit server – 20 CPUs, 100 GB RAM, 20 terabytes disk space
 - 100+ standard KPI Reports
 - Web-based KPI dashboards
 - 150 million records processed daily from 35 different source systems
- Customer, Channel, Product Profitability
- Real-time scenario modelling & decision capability
 - Customer Plan, Pricing, and Discount
- Result: gaining 900,000 new customers a month due to competitive edge in customer pricing!

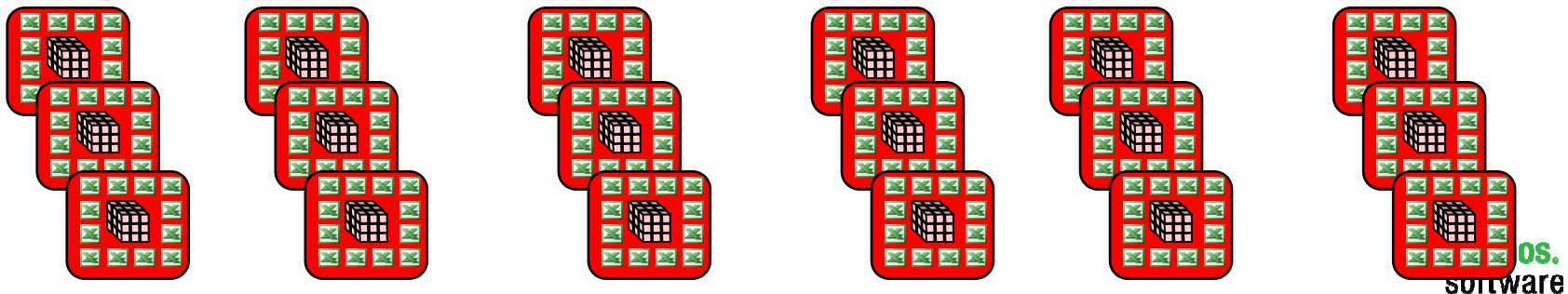
IBM Internal Finance – Previous Pain Points

- Over 200,000 users
- Global Deployment

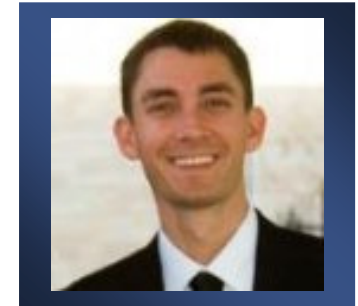
Essbase Based Implementation

- *Hundreds of Essbase Cubes = Maintenance costs*
- *Spreadmarts = manual errors*
- *Many servers around the globe = infrastructure costs*
- *Different processes to meet divisional variances = added complexity*
- *Inconsistent across different cubes = variability risk across geographies*
- *Significant load and recalculation times = Delayed access to timely data*

Multiple Essbase Cubes each with many associated Excel workbooks

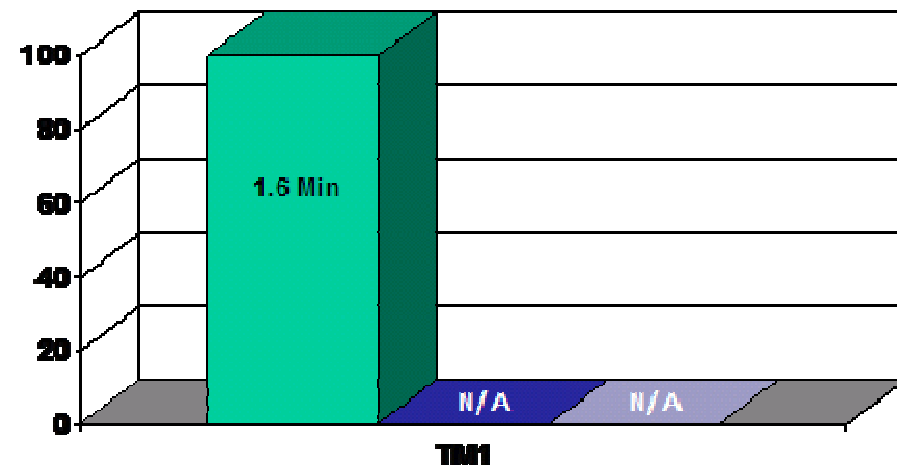
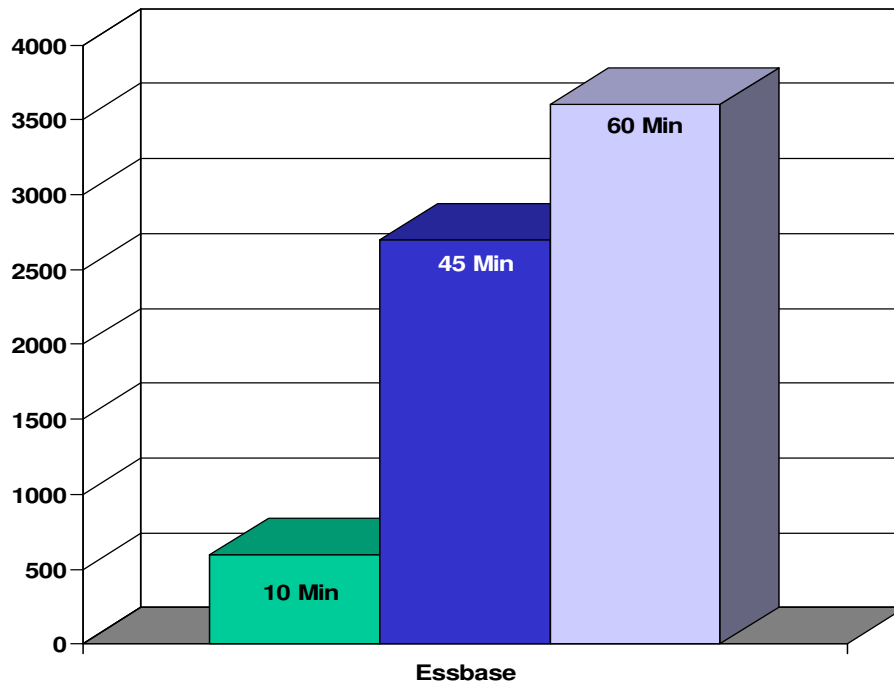


IBM Finance Benchmark Example: Essbase to TM1



- . 1 Months Data Load
- . Calc Time Average
- . Monthly Restructure Average

“With TM1, we were able to accelerate our pursuit of globally integrated processes and systems thru data/model scalability not previously available to us“
Director, Performance Management, IBM



■ Data Load ■ Calc Time ■ Restructure



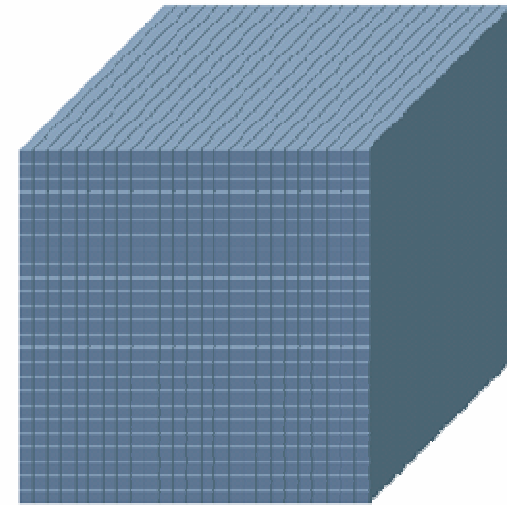
Architectural and project design differences

Single Cube OLAP

Unwieldy structure with unrelated data resulting in long calc times, sparsity management overhead, and significant maintenance

Single cube model

- Products
- Sales representatives
- Divisions
- Employees
- Cost centers
- Expense line items
- P&L items
- Balance sheet items
- Capital expenditure projects
- A 12-month plan
- Three versions



Single, monolithic cube encompassing profit-and-loss, sales forecasts, salary planning, and expense budgeting defies business logic and strains IT resources.

Sales revenue

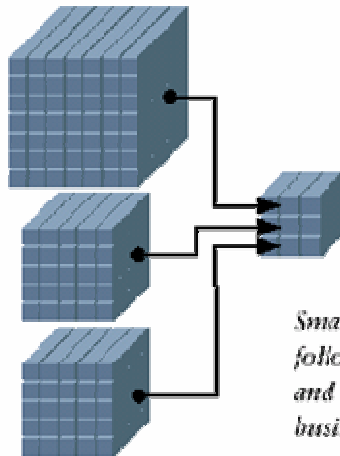
- Products
- Sales reps
- Planned monthly for 12 months
- 3 versions

Quarterly salary plan

- Divisions
- Employees per division
- Planned monthly for 12 months
- 3 versions

Overhead expenses

- Cost centers
- Expense line items
- Planned monthly for 12 months
- 3 versions



Profit and loss

- 12 P&L line items
- 12 months
- 3 versions

Small, manageable models follow business structure and logic; intelligent business object mapping consolidates relevant data.

Cognos Multi-Cube

Modular design links only related items, supports reuse of structures and lower maintenance (e.g., no need to filter unrelated intersections)

OS.
are

Amazing SCALABILITY

Example 1: 2.141 Duodecillion Phillips Lighting data points

Scenario	
Version	21
Year	84
Month	2,436
Days	77,952
BillingDoc	3,707,864,832
BillType	22,247,188,992
ShipTo	23,826,739,410,432
Customer	27,924,938,589,026,300
Plant	418,874,078,835,395,000
Material	1,808,279,398,332,400,000,000
BillingCurrencyType	5,424,838,194,997,190,000,000
BG	21,699,352,779,988,800,000,000
MAG	1,280,261,814,019,340,000,000,000
AG	364,874,616,995,511,000,000,000,000
Source	58,744,813,336,277,300,000,000,000,000
KeyMAG	2,467,282,160,123,650,000,000,000,000,000
Channel	101,158,568,565,070,000,000,000,000,000,000
TOPTD	5,867,196,976,774,040,000,000,000,000,000,000
Region	82,140,757,674,836,500,000,000,000,000,000,000
MaterialType	821,407,576,748,365,000,000,000,000,000,000,000
ProgramName	64,891,198,563,120,800,000,000,000,000,000,000,000
Sales_M	2,141,409,552,582,990,000,000,000,000,000,000,000,000

Amazing SCALABILITY

Example 2: 420.933 Duodecillion World Bank data points

PlanCommitmentItem	8	40776
WPA	5097	1,304,832
Version	32	6,157,502,208
ResponsibleFundCntr	4719	29,038,780,412,928
RequestingFundCntr	4716	756,256,958,293,884,000
Fund	26043	19,695,199,964,847,600,000,000
PartnerFund	26043	91,996,279,035,803,200,000,000,000
FundCntr	4671	76,724,896,715,859,900,000,000,000,000
BusinessProcess	834	2,378,471,798,191,660,000,000,000,000,000
CrossSupport	31	11,109,841,769,353,200,000,000,000,000,000,000
PartnerFundCntr	4671	698,064,687,893,772,000,000,000,000,000,000,000
Project-IO-CC	62833	420,933,006,799,944,000,000,000,000,000,000,000,000,000
Time	603	

Additional Requirements already Built-in to TM1

- ***Multi Currency***
- ***Organizational Structure Change and History Restate***
- ***Self Service***
- ***Work Flow and Approval Process***
- ***Drill Down***
- ***Flexible and Ad hoc Reporting***



Why TM1

BackUp pages

Speed is **paramount** to success

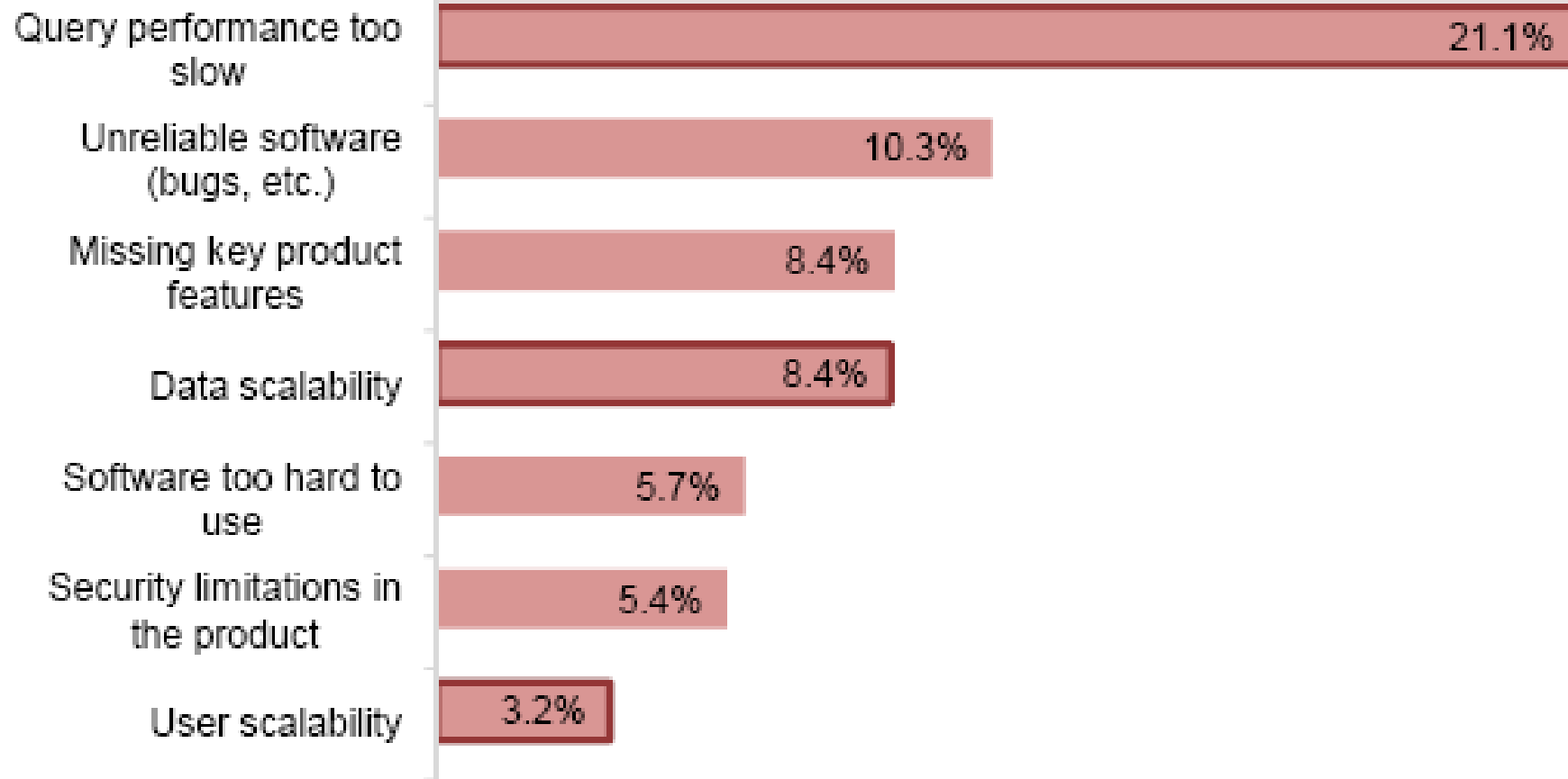
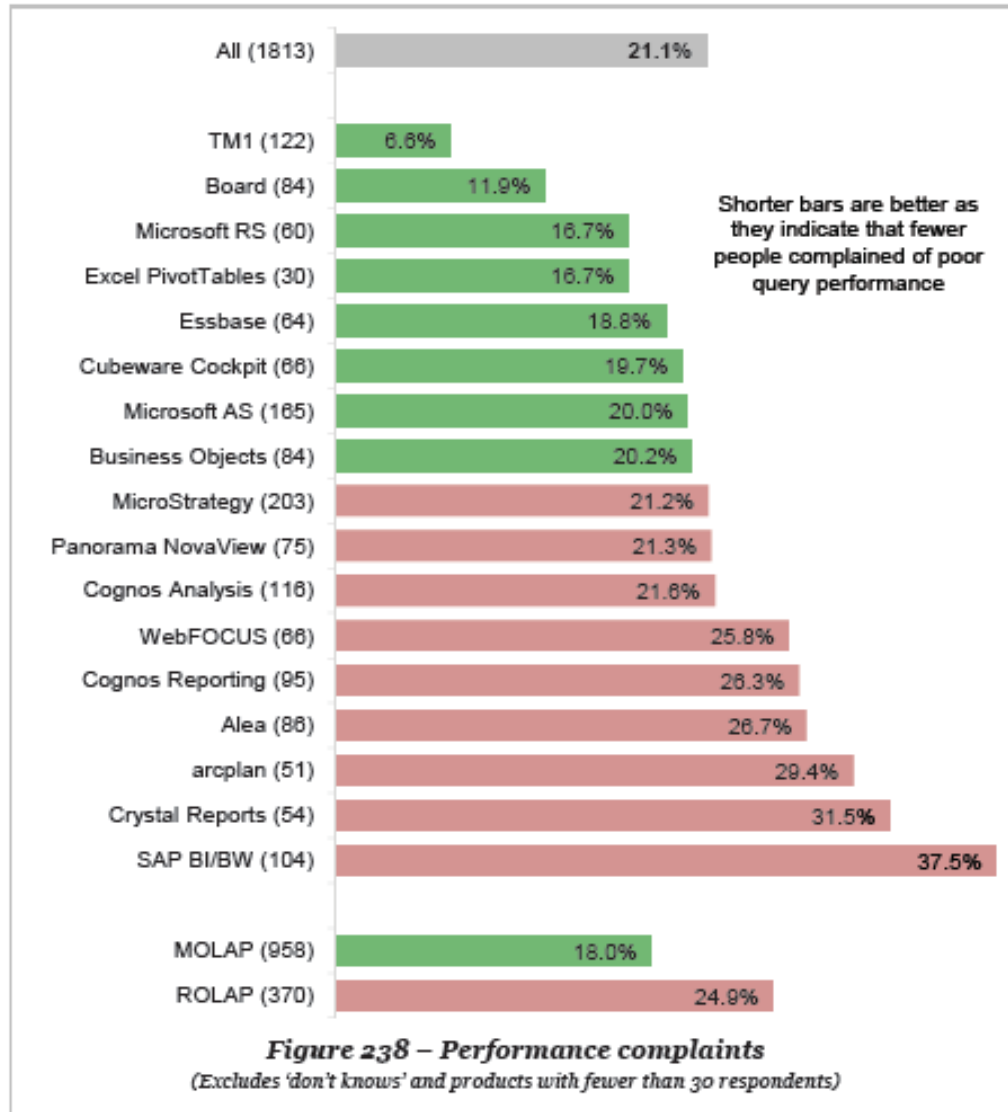


Figure 231 – Performance problems compared to other product-related problems

(Based on data from 1813 respondents)

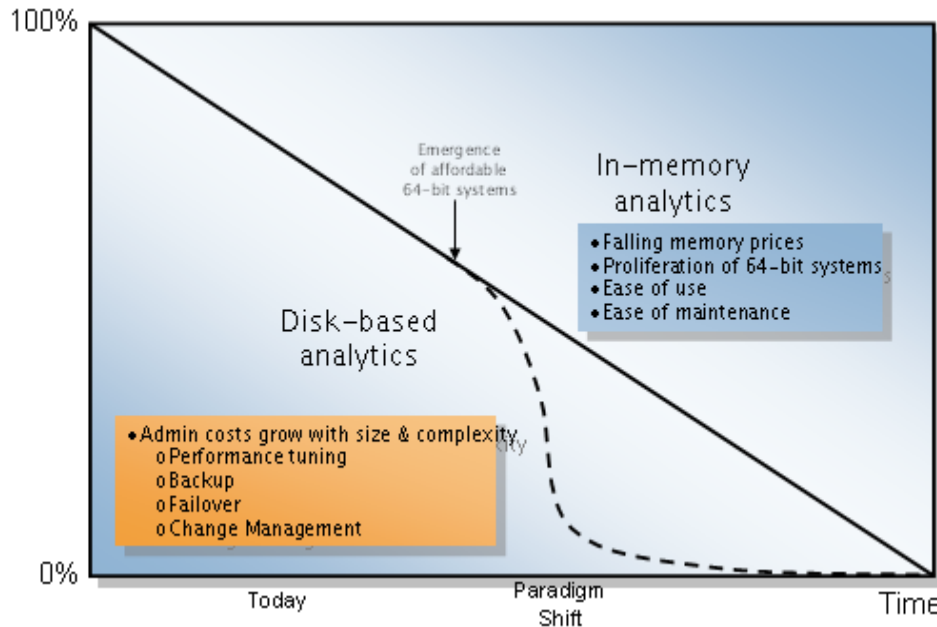
TM1's performance in the real world



Times in minutes	1st quartile	Median	3rd quartile	Median
All (1638)	7.38	47.60	183.25	47.6
Products				
Cognos TM1 Server (48)	0.80	3.57	13.75	3.6
TM1+ (54)	0.84	3.93	13.64	3.9
Infor PM OLAP+ (134)	1.18	5.56	47.73	5.6
Infor PM OLAP (114)	1.48	6.76	49.50	6.8
Crystal Reports (34)	2.64	7.50	142.50	7.5
Actuate Platform (28)	2.60	15.00	150.00	15
Cubeware Cockpit (60)	3.18	18.00	90.00	18
QlikView (120)	6.25	25.00	68.57	25
Microsoft RS (41)	5.36	25.50	215.00	25.5
Bissantz (43)	5.94	28.13	145.00	28.1
arcplan (44)	5.00	30.00	150.00	30
WebFOCUS (65)	10.83	34.50	118.13	34.5
Targit (34)	13.75	42.00	127.50	42
Board (121)	7.92	43.93	116.88	43.9
Panorama (40)	7.00	45.00	120.00	45
Microsoft AS+ (239)	10.88	47.73	152.37	47.7
Microsoft AS (109)	16.10	51.56	140.45	51.6
SAP BI/BW+ (80)	19.09	78.00	273.33	78
Hyperion Essbase (40)	25.00	90.00	240.00	90
Essbase+ (52)	23.57	93.33	240.00	93.3
SAP BI/BW (61)	28.39	126.00	506.25	126
Cognos Reporting (83)	45.83	156.67	562.50	156.7
Cognos Analysis (33)	92.50	161.25	431.25	161.3
Cognos PowerCubes+ (42)	98.57	163.64	412.50	163.6
Oracle BIEE/BISEO (35)	29.06	165.00	279.00	165
MicroStrategy (192)	56.25	167.65	600.00	167.6
BusinessObjects (66)	76.67	207.69	578.57	207.7
Suite				
SQL Server (150)	12.38	44.29	154.62	44.3
Hyperion (58)	20.36	90.00	210.00	90
Oracle classic (30)	41.25	97.50	158.57	97.5
Business Objects (107)	8.13	117.27	294.38	117.3
Cognos BI (116)	57.27	158.82	510.00	158.8

Figure 292 – Data latency by product and suite

TM1's speed secret: "In-Memory" RAM based architecture



- 1,000,000 times faster than disk
- 64 bit addressability: no limits!
- Ultra fast loads; queries; calcs.
- Big models; data volumes



BI Applications Benefit From In-Memory Technology Improvements

Gartner RAS Core Research Note G00141540, Kurt Schlegel, Mark A. Beyer, Andreas Bitterer, Bill Hostmann, 2 October 2006 R2037 4/19/2007

STRATEGIC PLANNING ASSUMPTION(S)
 By 2012, 70% of Global 1000 organizations will load detailed data into memory as the primary method to optimize BI application performance (0.7 probability).

ANALYSIS

embraced a different architecture to optimize BI application performance. Instead of building an aggregate layer, detailed data is loaded into memory where calculations are performed "on the fly" at query time. Our research indicates that query performance using this in-memory method is often just as fast as or faster than traditional aggregate-based

Comparison with similar vendors



Oracle/Hyperion

- **Really Integrated?**
 - BI: OBIEE? Interactive Reporting? Web Analysis? Financial Reporting? SQR Reporting....
 - EPM: Essbase for Planning, .NET for Consolidation and Strategy Financing
- **Cost for customer!**
 - Option for CapEX/OpeEX Planning, Workforce Planning, Product Profitability Management, Strategic Financing, Essbase vs. Planning
 - 1.6M USD extra cost in MIN. User lic.
- **Performance is KEY!!**

SAP/BOBJ

- **Really Integrated?**
 - ABAP? BPC? BW? Outlook Soft? BOBJ?
- **Cost for SAP installed base**
 - Extra cost for BPM/BI licensing
- **Customers need “Advanced Analytics”!!**



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