



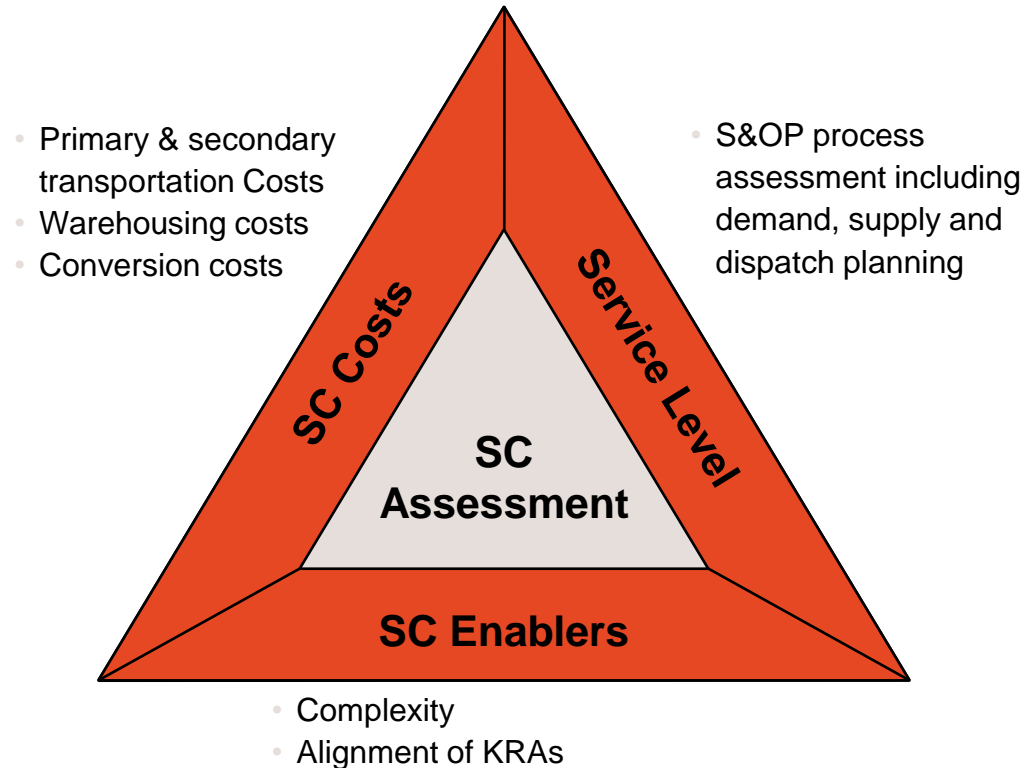

TRIUMPH ADVISORY GROUP
STRATEGY | OPERATIONS | TRANSACTIONS

Supply and
Distribution
Network
Design for a
CPG company

CASE STUDY

The focus of the assessment was on identifying opportunities to reduce costs and improve service levels

SC Assessment framework



U.S. Benchmarks

Metrics	U.S. BIC ¹
Total Logistics Costs (% of Net Sales)	4.6-5.3%
Transportation Costs	3.7-4.1%
Warehousing Costs	0.9-1.2%
Sales Returns	0.5%
Service Level	95%

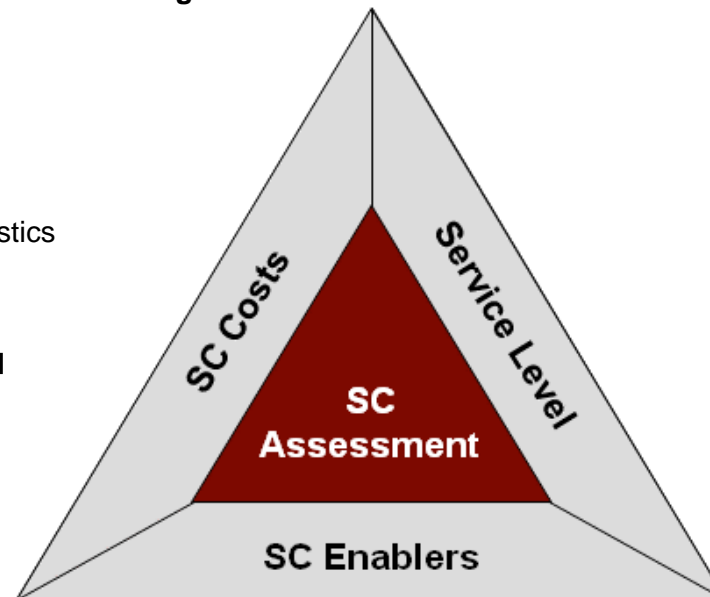
We have identified opportunity areas to enable the client's SC progress towards Best in Class performance

Overall, we identified 8 key opportunities to improve the client's Supply Chain performance

Opportunities for the Client

Optimize the SC Network – **Optimal manufacturing and distribution footprint**

1. **Rationalize rates** across various logistics elements – secondary transportation, warehousing and conversion
2. Reassess **3P contract structure and management processes**



3. Redesign **S&OP process** – timelines, agenda, formats, etc
4. Strengthen **demand planning** – top down process, forecasting methodology
5. Improve **supply planning** – production planning templates, inventory norms for key RM/PM/FG, medium term capacity planning
6. Restructure **dispatch planning** – stock-trigger based replenishment

7. Reduce complexity – **ongoing process for assessment and rationalization of SKUs, promotions, etc**
8. Strengthen **reporting and tracking** mechanisms – redesign MIS and strengthen KRAs

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Supply Chain Assessment Approach

Detailed Analysis

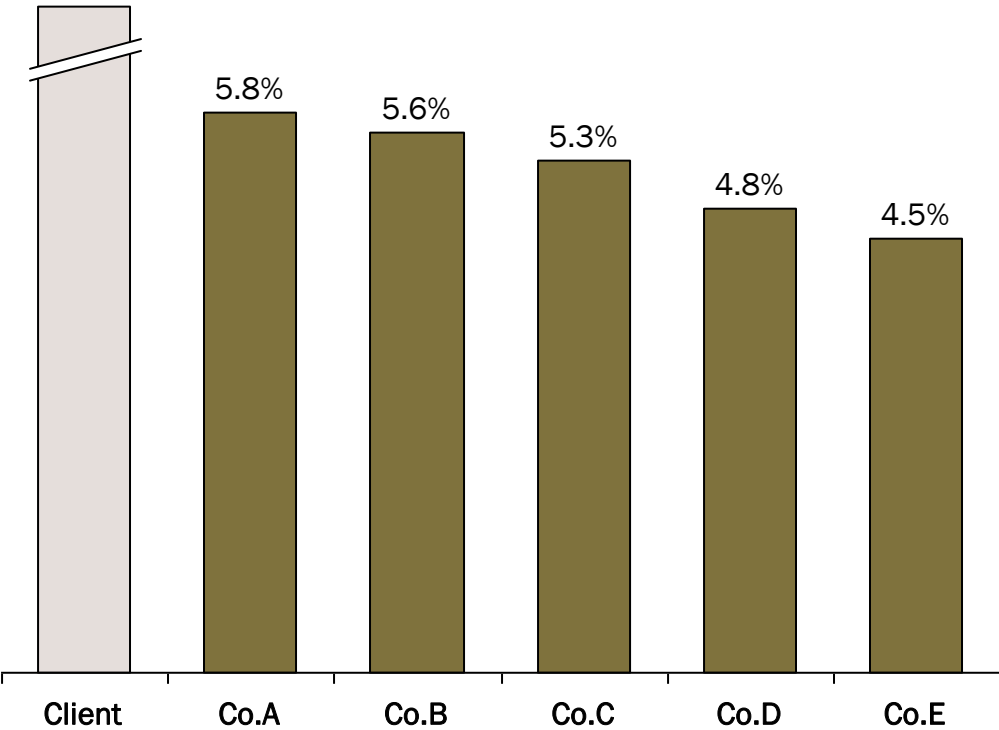
– **SC Costs**

– Service Levels

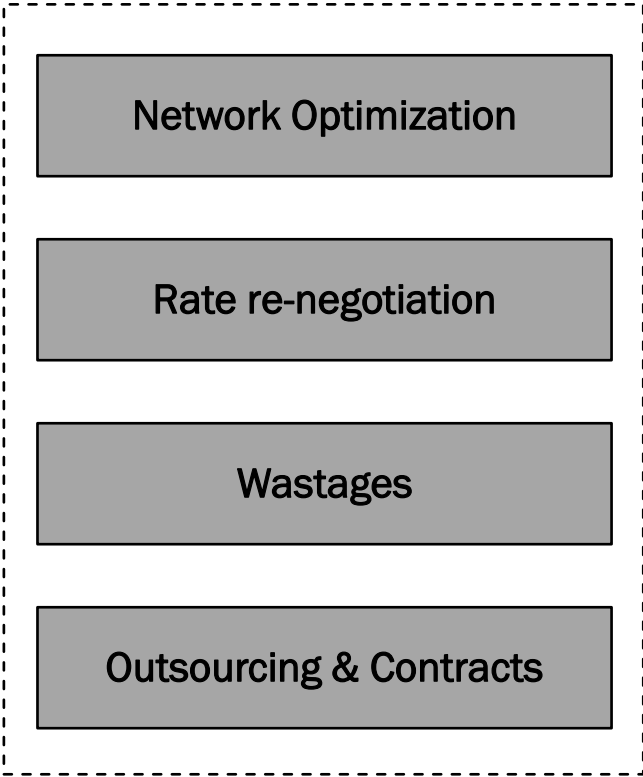
– Enablers

Client's cost are higher compared to peers – multiple levers need to be considered to address this

Total logistics⁽¹⁾ cost benchmark (% of Net Sales)



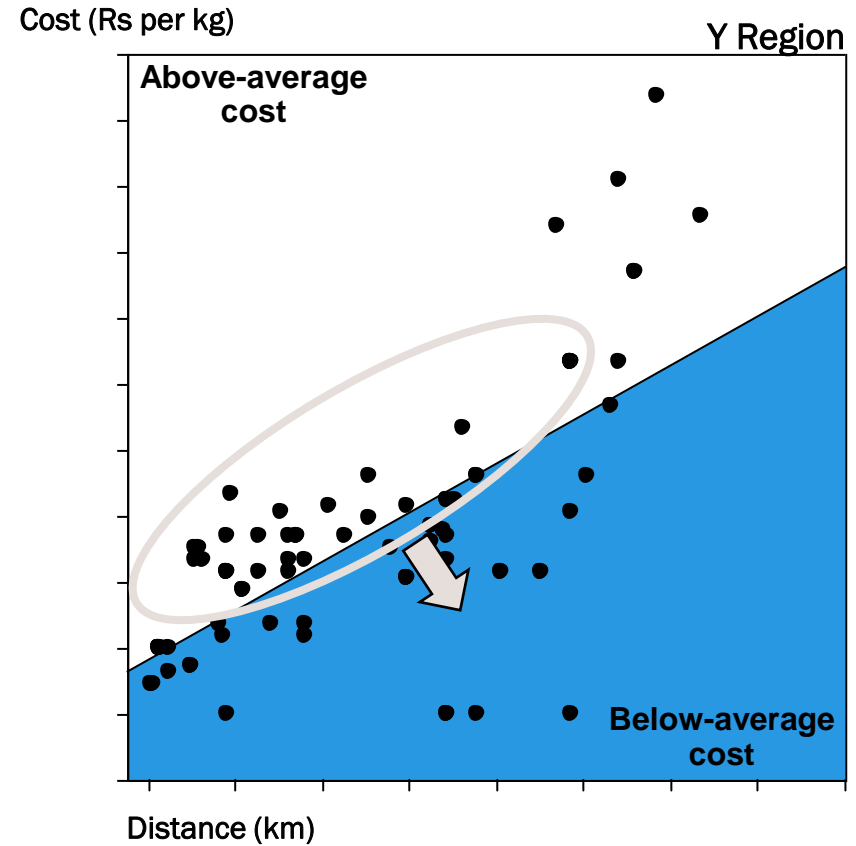
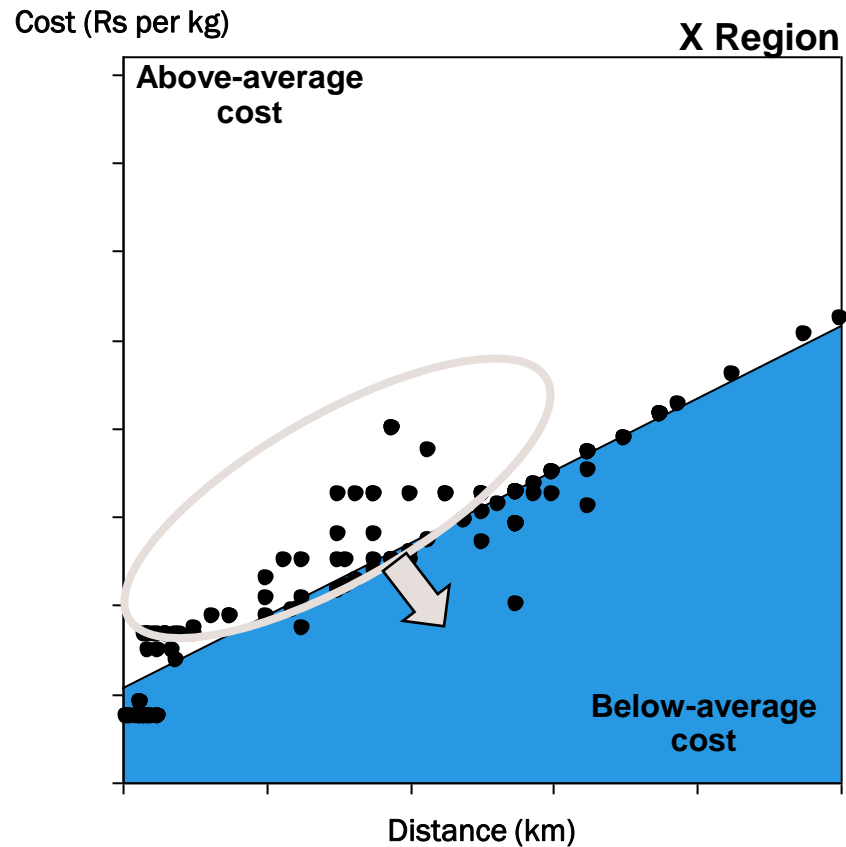
Cost Reduction Levers



(1) Logistics costs comprise carriage, freight and distribution costs
(2) Dummy data for client

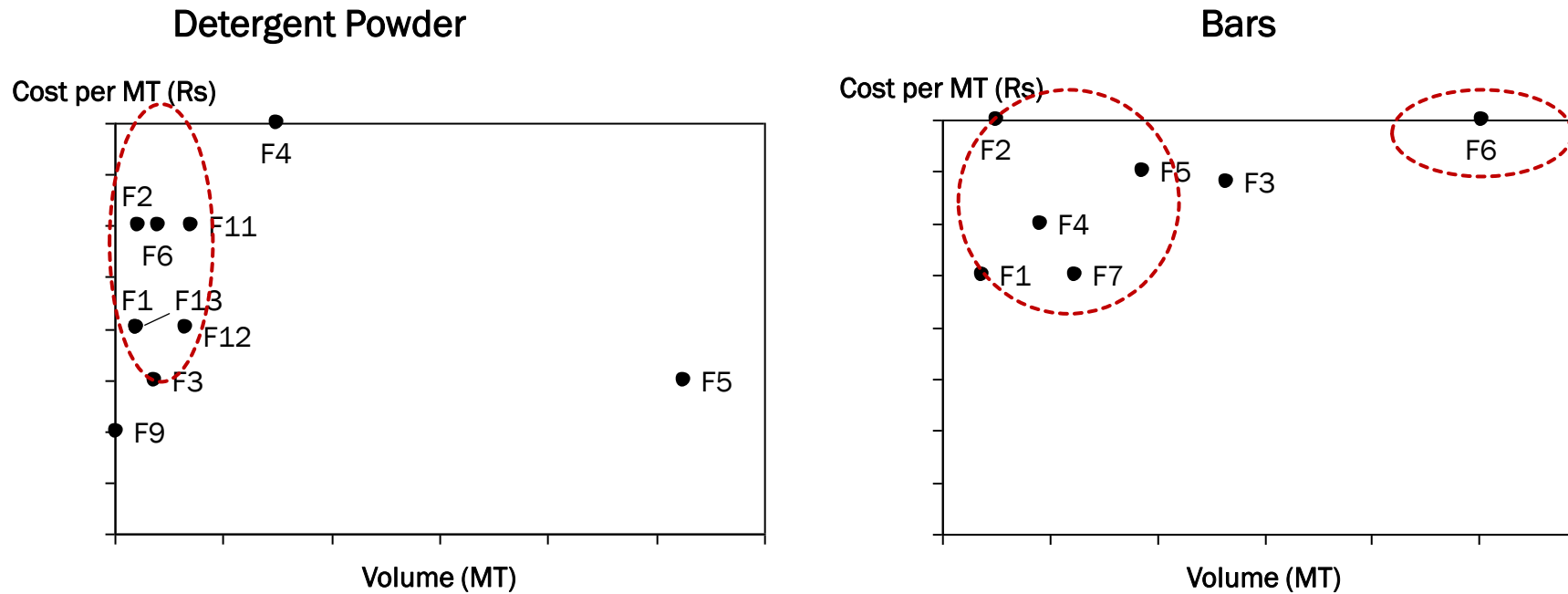
Significant variation in secondary costs within regions – potential for rate rationalization

Secondary transportation cost



Costs of various toll manufactures need to be assessed in detail – opportunity may be there to renegotiate rates

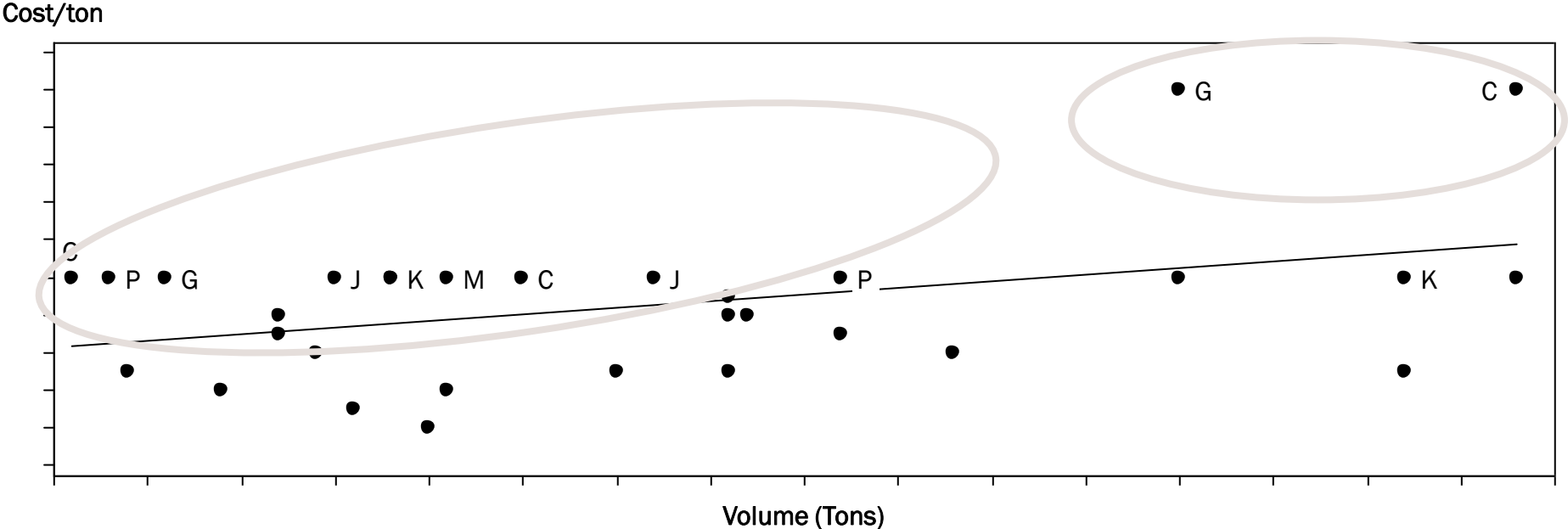
Toll manufacturer cost vs. scale



Key Observations
<ul style="list-style-type: none">• High variation in costs/MT across factories of same scale producing products of the same segment• Lack of transparent and standard should-costing methodology of toll manufacturer's costs• Costing tools, database and templates not used for conversion cost calculations of 3Ps

Variable warehousing costs also vary significantly

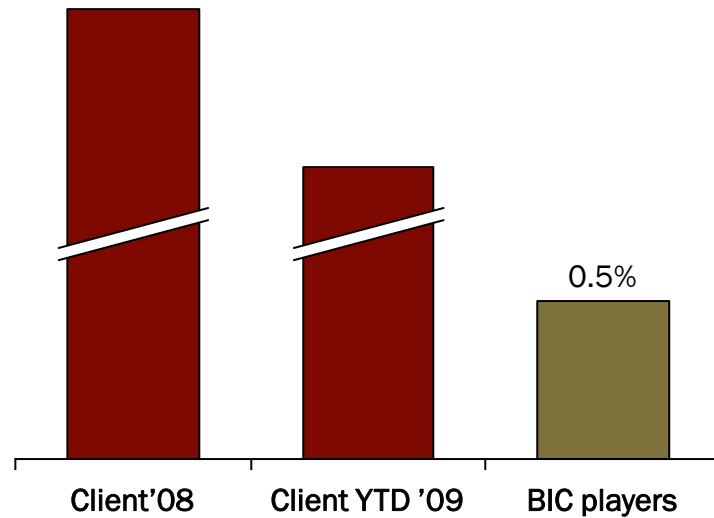
Variable Warehousing Costs by Volume



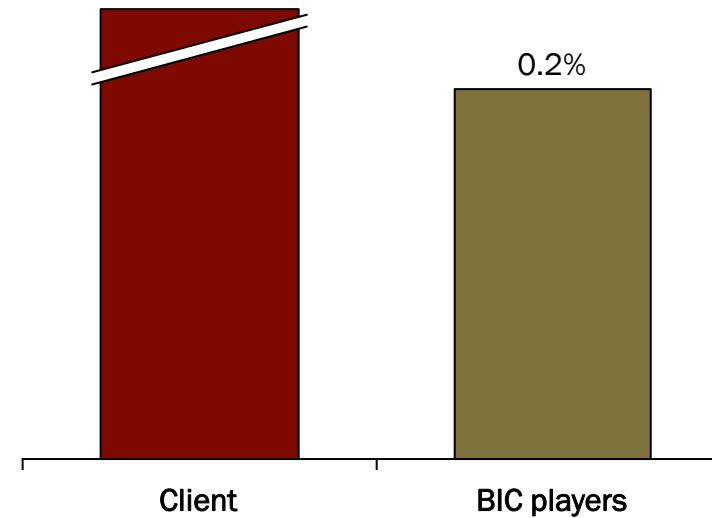
- | Key Observations |
|---|
| <ul style="list-style-type: none">• High variation in variable costs across locations for warehouses handling similar tonnage• Depots handling MT loads may have higher variable costs per ton - yet, the variations are significant• Lack of standardized contracts – varying costs across warehouse operators• Fixed costs (other than rents) like management fees also vary significantly |

Wastages have come down – but are still high

Returns as % of Net Sales



Inventory Write-offs as % of Net Sales



Key Observations

- **Overselling/ over deliveries** and returns of slow moving inventory add to the returns
- Incorrect shipments leads to higher sales returns
- High returns also due to transition and **stock corrections at Depots** (mid-2008 to early 2009)
- **Planning processes** need to be strengthened to reduce inventory write-offs

Current model of buying goods on full cost basis may add costs – needs to be assessed further

Outsourcing model comparison

Client – principle to principle model	Typical Industry Practices
<ul style="list-style-type: none">• Purchase of trading goods from the Toll manufacturers attracts inter-state tax of 2% in case of cross-border transfers• Inventory lies on the 3Ps books, associated costs built-up in the overall costs of the 3P• Responsibility of sourcing (from Client specified suppliers) and managing RM is with 3Ps – lower management complexity for the company	<ul style="list-style-type: none">• Most companies have a conversion costs based outsourcing model• All RM/PM centrally planned and shipped to the parties as per production plans• Inventory lies on the books of the company, though working capital costs for the FMCG would be lower compared to 3Ps• No inter-state tax is paid in such cases

Key Observations
<ul style="list-style-type: none">• Multiple firms prefer conversion cost based outsourcing model• Complete transparency of the 3Ps cost build-up; helps in reducing total conversion costs• Greater involvement of FMCG firms in 3P operations to drive efficiencies• Conversion cost model leads to better transparency of RM utilization

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Supply Chain Assessment Approach

Detailed Analysis

– SC Costs

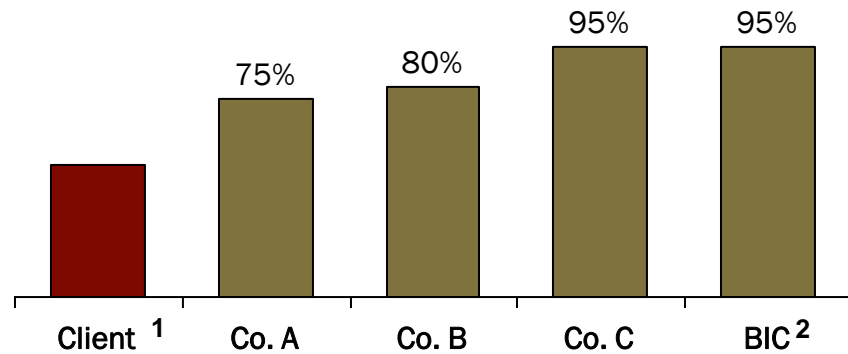
– **Service Levels**

– Enablers

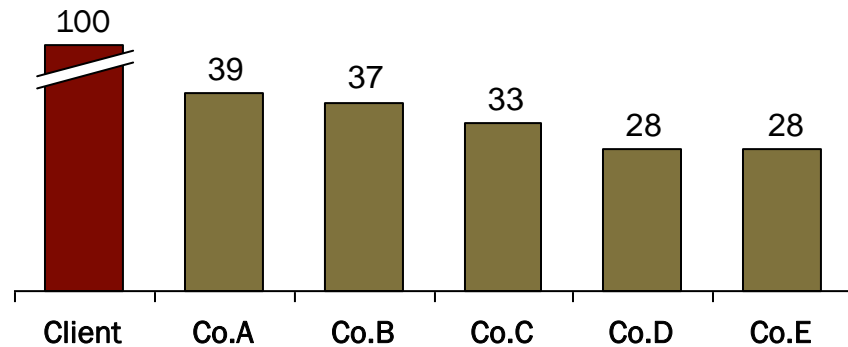
Significant planning process improvements required to reduce inventory and enhance service levels

Service Level and Inventory Benchmark

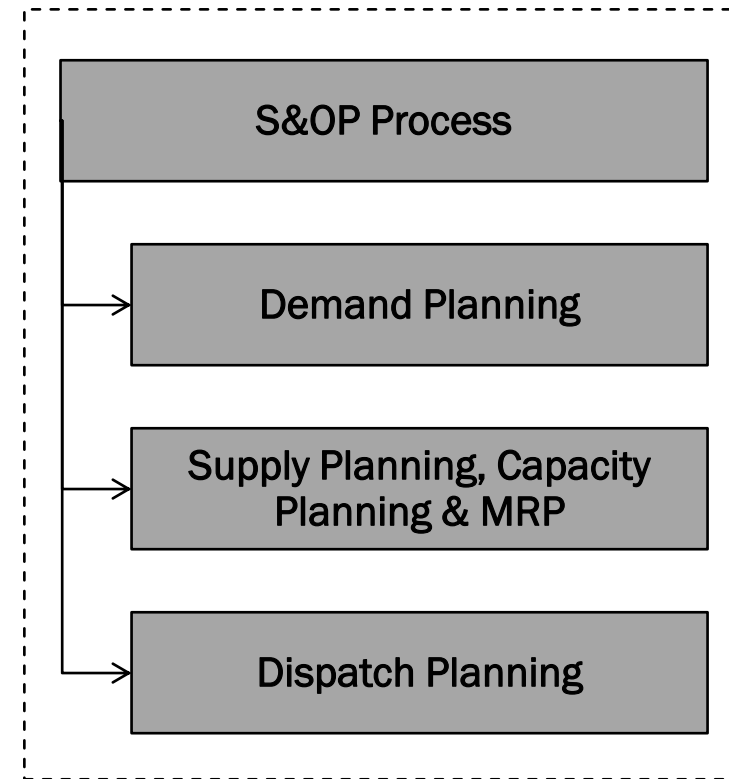
% Range Availability at Depots



Days of FG Inventory, FY 2008



Service Level improvement – Planning processes

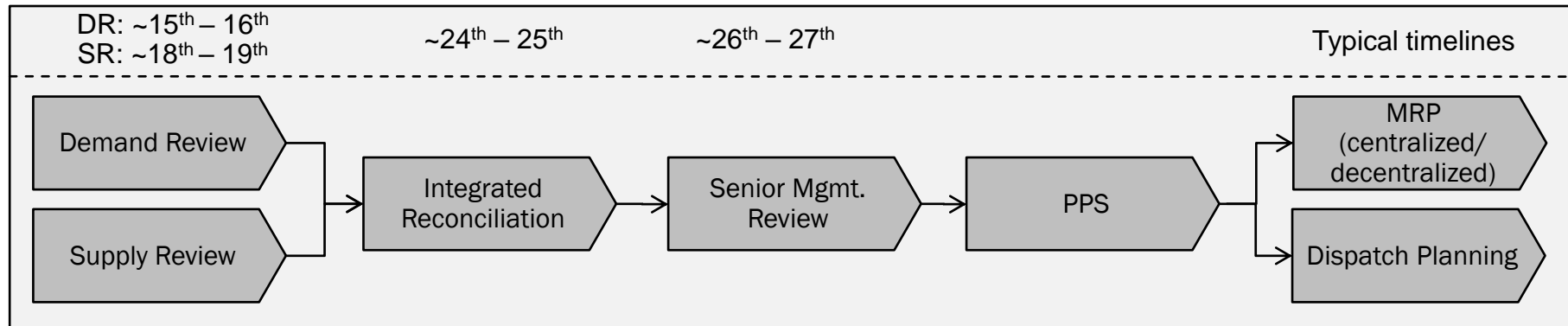


(1) Dummy data for client

(2) BIC refers to U.S. FMCG players in terms of Depot Range Availability

Shift to a best in class S&OP process will help to drive operational alignment and improve order fulfilment

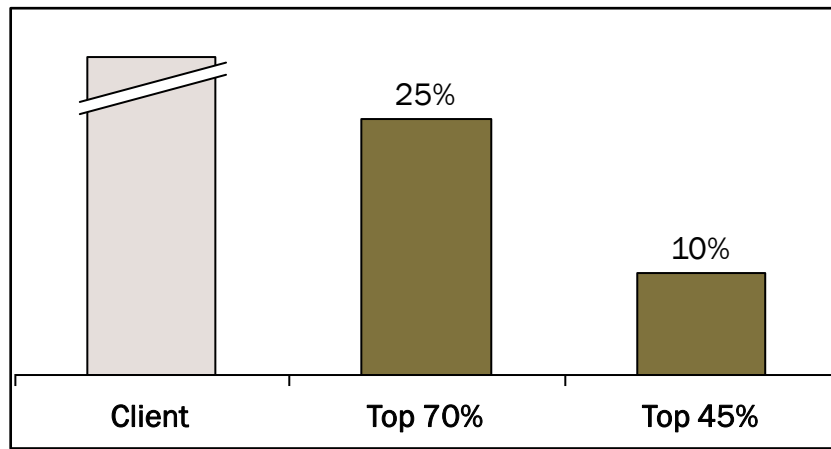
Best in Class S&OP process



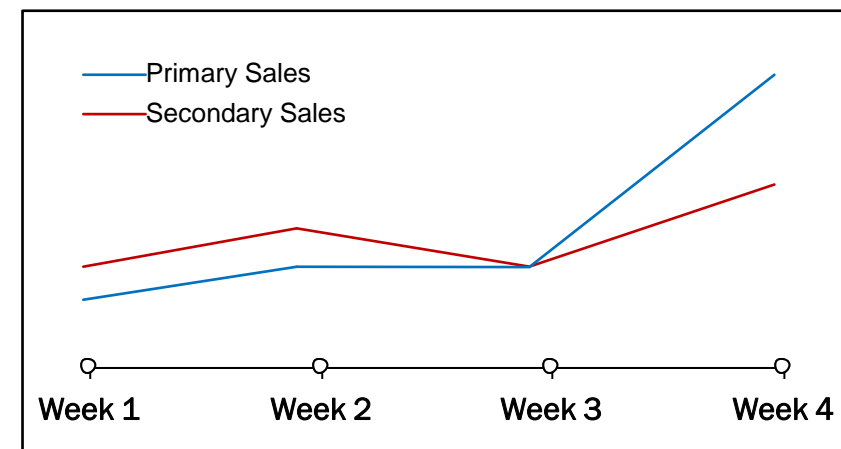
Parameters	Key Elements of BIC Process
Planning cycle	Monthly for rolling 3 months (with weekly buckets) and weekly review
Orientation / Agenda	Review by exception
Timelines	Senior management review by the 27th / 28th of the month
Sequence / Procedure	PPS and MRP for the coming month to be done after Senior management review; production planning done according to inventory norms
Templates	Standard templates to be used, all teams aligned to nos. discussed in integrated reconciliation
Time fences	Meeting scorecard published to ensure adherence to time fences
Review	Weekly demand and supply review to discuss issues and decide on action plan

Demand planning process needs to be redesigned – current process leads to high forecast errors

Average error in forecast⁽¹⁾
(%)



Secondary to primary sales



Key observations

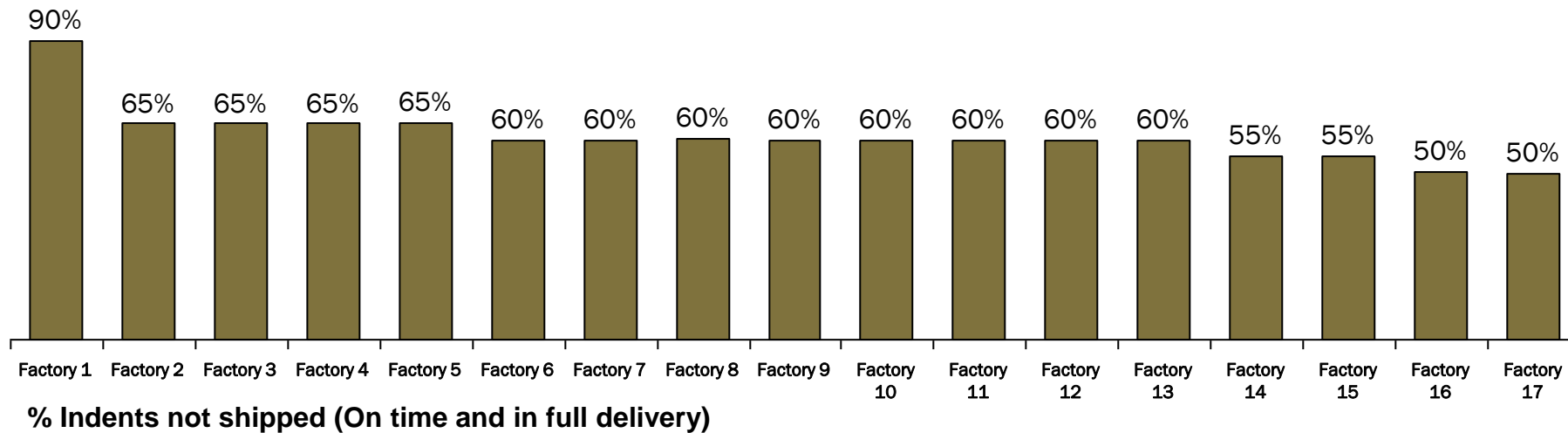
- Template does not provide **'top-down'** suggested volume or SKU priority
- Demand review to include **participation** from requisite departments
- Inaccurate **secondary to primary forecast conversion**
- Forecasts are **manual**; no statistical tools used for demand calculations
- No updates of forecast during the month
- **Low accountability** for forecast accuracy across sales organization

(1) Dummy data for client

(2) Top 70% and top 45% refers to the top 70% and top 45% companies in terms of forecast accuracy

Supply planning and production scheduling needs to be strengthened to improve service and inventory levels

Actual dispatch vs. Indents for UW Weekly, 3 Months

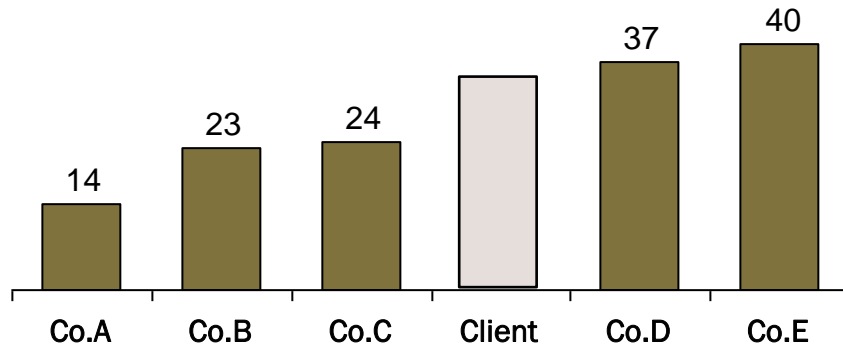


Key Issues

- **Indents sent before operations meeting**, PM orders placed according to indents
- **Short-term restrictions on capacity** often communicated after indents are placed
- Lack of clarity on **inventory norms** – norms need to be defined and monitored
- **Production scheduling** needs to be **aligned** to requirements on a **weekly basis**

MRP and medium term capacity planning processes need to be streamlined

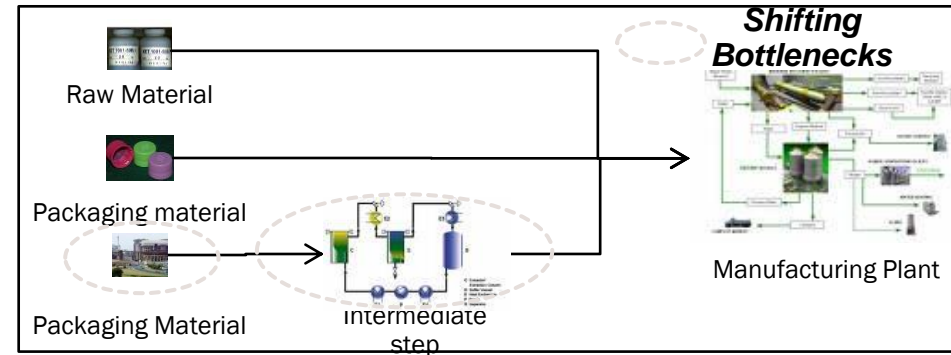
RM/PM Inventory days, FY 2008



MRP

- PM ordered in advance yet high level of PM stock-outs at toll manufacturers
- PM ordering done based on production plans, very less flexibility to change orders after Ops. review
- Frequent promotions, not tied in with PM planning
- Transparency (RM/PM inventory, incoming orders) in the system is low, inventory norms for key RM and PM need to be defined

Capacity constraints: Example



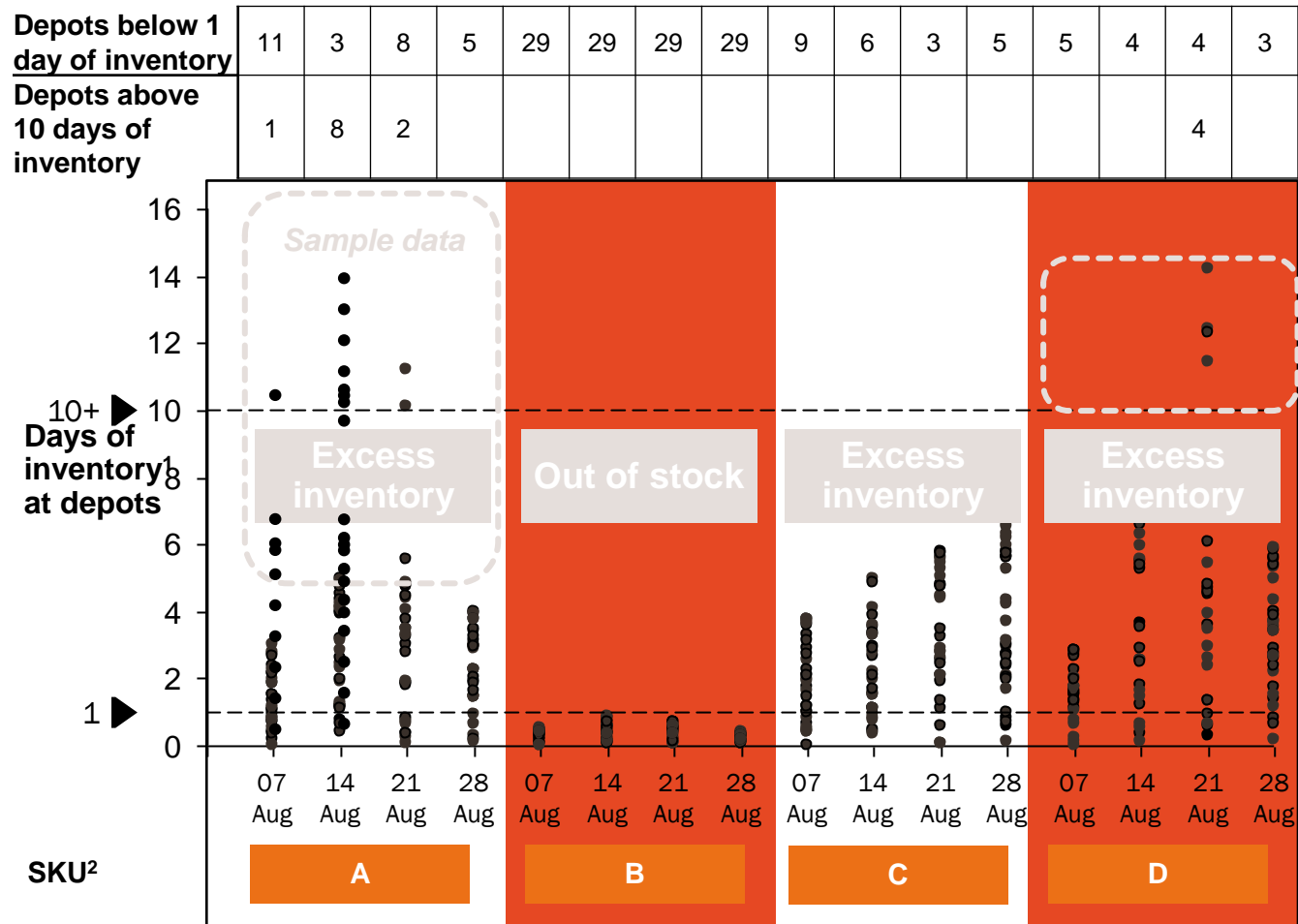
Capacity planning

Medium term capacity planning

- Lack of centralized medium term capacity allocations based on demand and available capacities
- No zonal business plans for mid-long term, hence, limited visibility of capacity requirements
- Capacity enhancements are reactive instead of proactive

Sub-optimal dispatch planning leads to stock-outs at depots while there is high inventory in the system

Stock status at depots



Key Issues
<ul style="list-style-type: none"> • Forecasts based dispatch planning, not on actual sales at depots • Dispatch plan based on transportation cost rather than total cost optimization, primary focus is on truck consolidation • Hubs used only to consolidate truck-loads not to consolidate inventory close to market • Limited flexibility to make routing changes or to add additional depots to a route

1) Dummy data for client

Dispatch needs to shift to a pull based system - in two steps

Current Dispatch Planning Process

While in the long term there is need to shift to end-to-end pull...

- Implement pull between factory to depot - Dispatches from factories to be based on stock triggers from the depot
- Implement **pull between depot and distributor** – dispatches based on actual sales
- Automate the distributors to have real-time access to sales and stock availability (pre-requisite to implementing depot to distributor pull)

...in the short term an intermediate solution can be considered

- **Setup mother depots** with high replenishment frequency along with factory to depot pull (*Setting up of mother depots being addressed through model based network optimization*)
- Implement **pull between depot and mother-depot**
- Dispatches from factory to be based on **reorder triggers** from mother depots
- SC to have **weekly review** with sales and dispatch stocks accordingly
- Daily updates of stock availability at depots with the SC team

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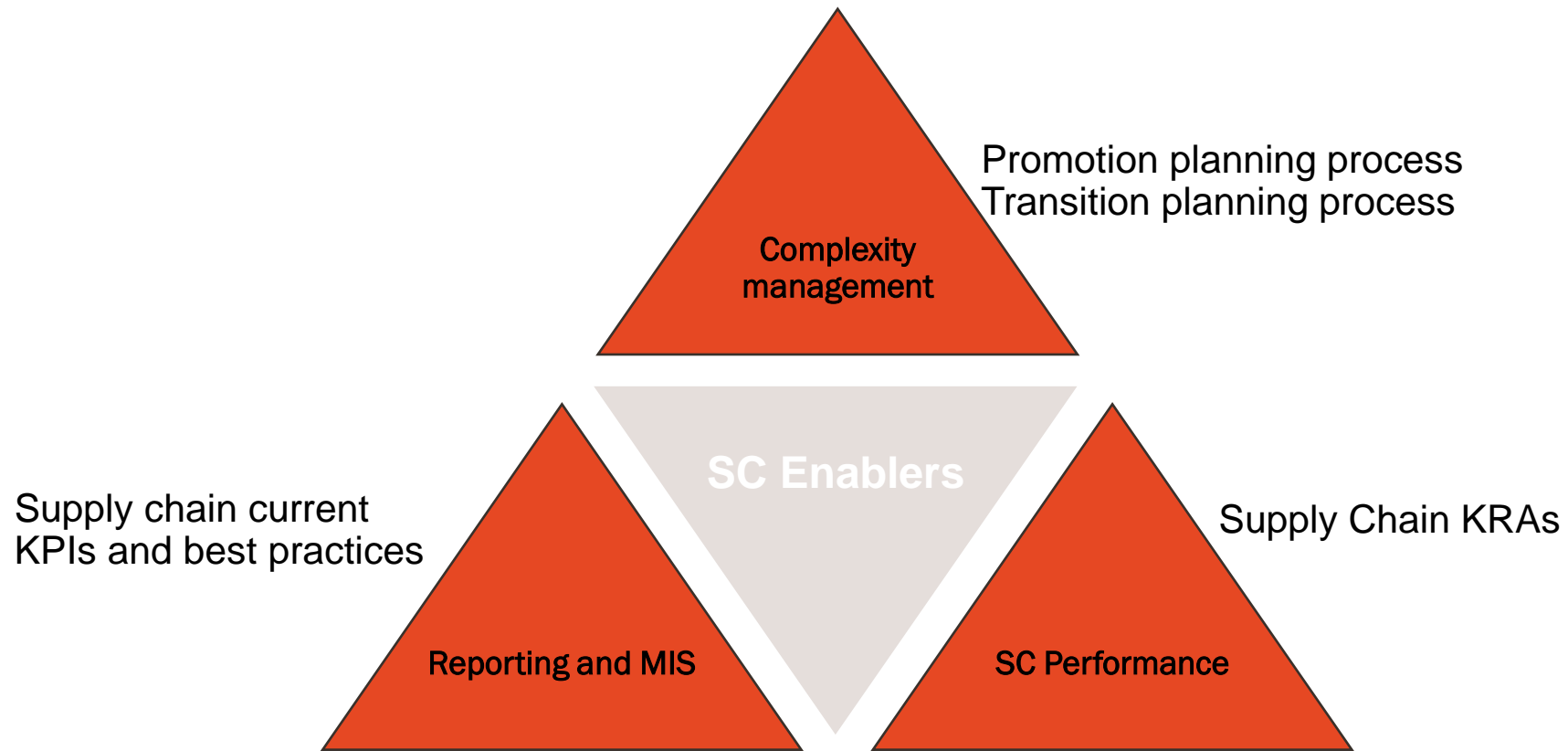
Supply Chain Assessment Approach

Detailed Analysis

- SC Costs
- Service Levels
- Enablers**

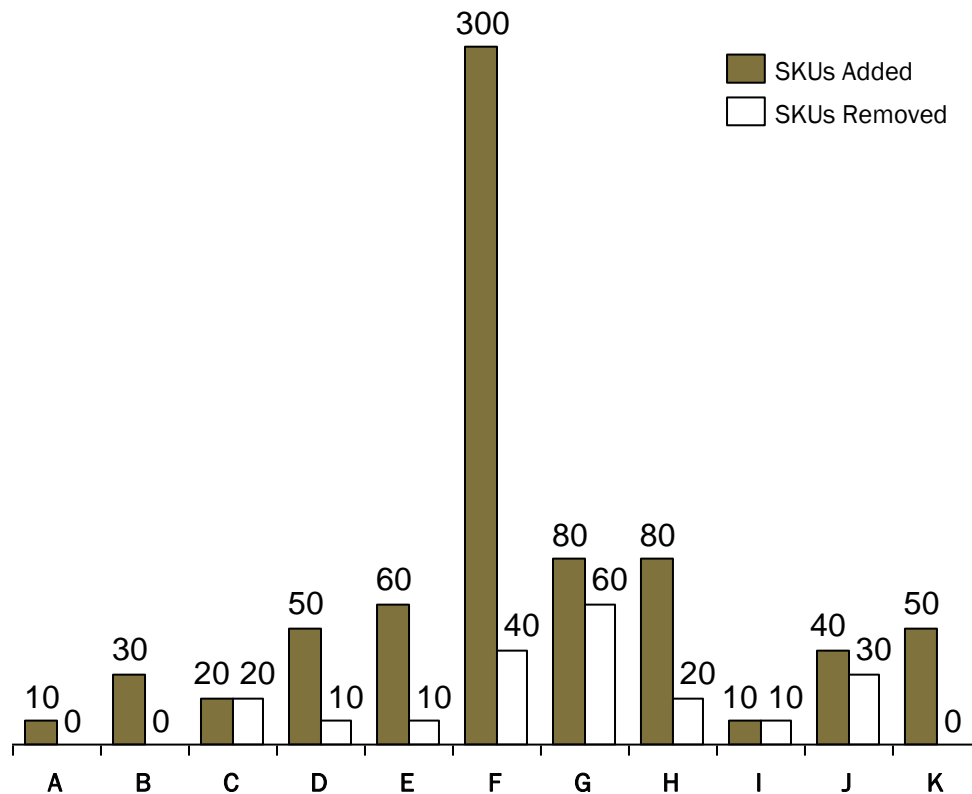
Multiple other organizational improvements required to drive down SC costs and improve service levels

Supply Chain Enablers – Opportunity Areas



Promotion & transition planning process redesign along with regular SKU rationalization are key enablers

SKU Transitions (IDH changes) (2 Months)

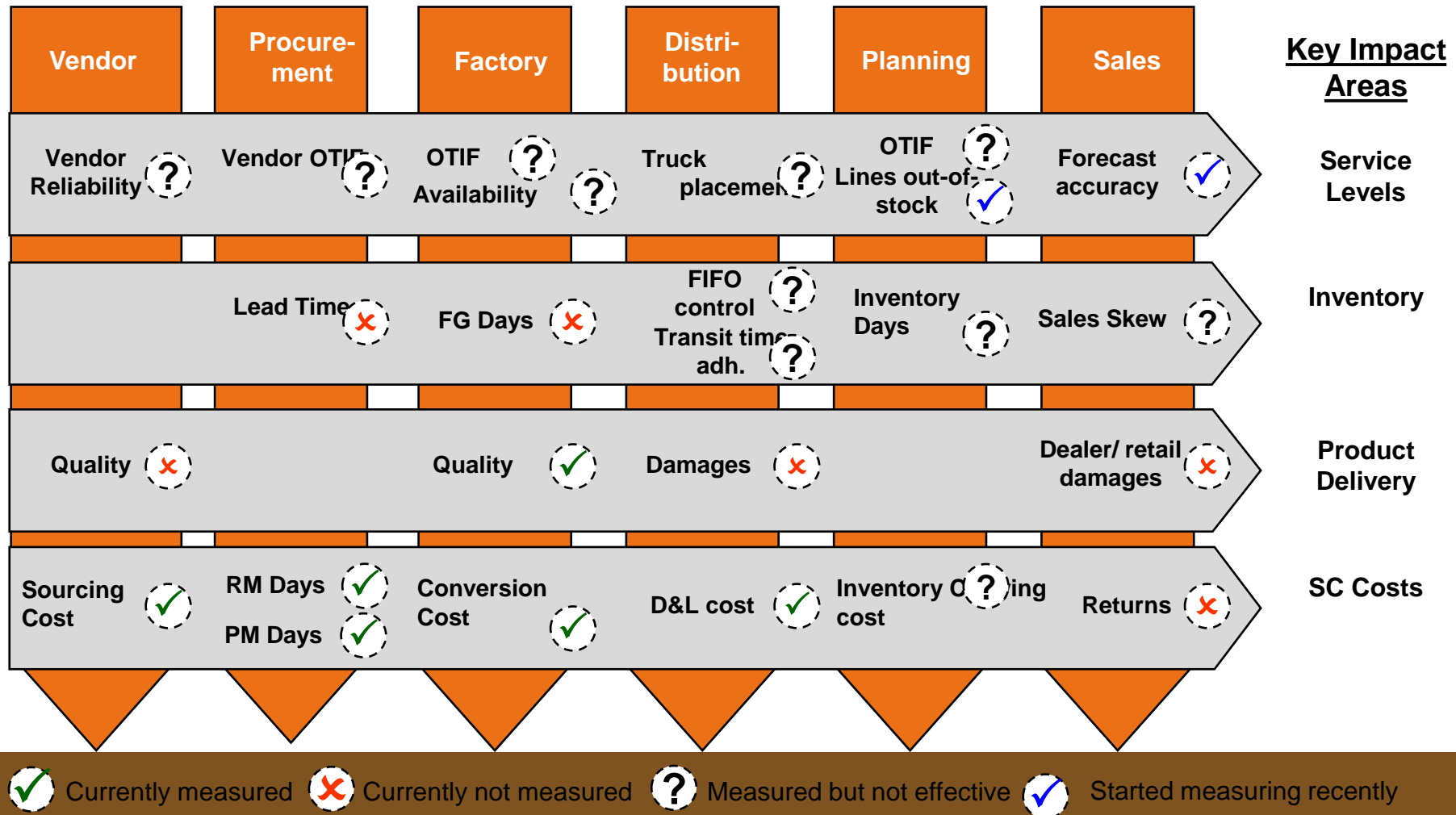


Promotions & Transitions Planning Processes

Key Issues
<p><i>Portfolio assessment</i></p> <ul style="list-style-type: none"> • Lack of robust process for periodic SKU portfolio assessment and rationalisation <p><i>Promotions Planning</i></p> <ul style="list-style-type: none"> • Promotions and offers cause significant SKU proliferation and increase system complexity • Few cross-functional discussions with production / procurement <p><i>Transition Planning</i></p> <ul style="list-style-type: none"> • Transition planning not integrated with demand / supply planning processes which results in: <ul style="list-style-type: none"> - SKU introduction in the market occurs at varying intervals, long transition time across the country

Key result areas may need to be redefined to better align individual and supply chain organizational objectives

Supply chain key result areas



Reporting metrics need to be strengthened to better monitor and control supply chain performance

Current KPI reporting vs. best practice

