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Logistics Focus™

In-house Publication of Transport Corporation of India Ltd. March 2014

COFFEE
THE SUPPLY CHAIN

COLD/FRESH
SCM

INDIA FOOD
FAST GROWTH FOR CHEAP EATS

QSR
LOGISTICS & SCM

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In Vogue

Logistics Focus, an In-house Publication of Transport Corporation of India Ltd is now available on Google play Store & Apple App Store.

Description
All editions of the magazine.
Corporate film of TCI

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Compatibility: 2.2 and up

For iOS
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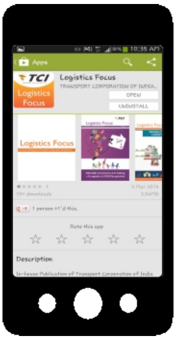

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KNIT

Editor: Corporate Communications Team
Editorial office: TCI House, 69 Institutional Area, sector-32, Gurgaon-122207
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About us

Transport Corporation of India is India's leading integrated supply chain and logistics solutions provider and a pioneer in the sphere of cargo transportation in India. Leveraging on its extensive infrastructure, strong foundation and skilled manpower, TCI offers seamless multimodal transportation solutions. An ISO 9001:2008 certified company, TCIL is listed with premier stock exchanges like NSE and BSE.

The company progressed from being a "One Man, One Truck, One Office" set up to becoming India's leading Logistics & Supply Chain Solutions provider with a Global presence. After 50 years, TCI moves 2.5% of India's GDP by value and is the proclaimed market leader of the Indian Logistics Industry.

TCI Group has an extensive network of over 1000+ company owned offices, a huge fleet of customized vehicles and managed warehouse space of 9.75 million sq. ft. and a strong work force of 5000+. With its customer-centric approach, world class resources, State-of-Art technology and professional management, the group follows strong corporate governance principles and is committed to value creation for its stake holders and its social responsibilities.

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TCI Seaways has well equipped ships in its fleet and caters to the coastal cargo requirements for transporting container and bulk cargo from Ports on the East coast of India to Port Blair in the Andaman and Nicobar Islands and further distribution within the islands.

Dear Friends,

Last time "the guide" had shown you the world of 'production logistics'; we hope you would agree that it was an interesting read as a lot goes to make the product reach the consumer!!!

Having said the above, I am sure you readers are all set for a more exciting endeavor in this Year 2014. This time "Mr. Guide" would take you to the yummy world of Burgers, Fries, Wraps, milk, Shakes & of course the ubiquitous but must have Cappuccino and Espressos!!!

Mr. Guide would traverse through a journey covering "from Farm to Fork", we unravel how the logistics and SCM teams of various QSR brands work relentlessly, smartly, constantly innovating and in the process enabling the counter sales person to serve in a "jiffy" your favorite fast-food all so hot or cold ,fresh, nicely packed, ready to eat.

So for 'people on the move', the insights of the intricate supply chains and logistics models behind the QSR Chain is like finding a fabulous treasure at the end of a tough ordeal.

Come on let's begin the lip smacking SCM treasure hunt with me ----------------------"Mr. Guide".

Yours truly,
Jasjit Sethi

Jasjit Sethi
President & CEO, TCI SCS

Jasjit heads TCI Supply Chain Solutions, which is part of Transport Corporation of India Group. Jasjit is an Alumni of Harvard Business School, Amity Business School, besides short term courses with NITIE, Powai and National University of Singapore, amongst others.

He is Past President of Delhi Roundtable of CSCMP, member of FICCI National Committee on Infrastructure etc.

Quick Service Restaurant (QSR)-Industry Overview

Organised Fast Food in The Fast Lane

CRISIL

01

Definition of QSR market

A quick service restaurant (QSR) is characterised by fast food cuisine, minimal table service and a fixed menu. The food (or ingredients) is prepared in bulk in advance and is packaged to order. QSRs are able to compete with casual dining restaurants on the basis of factors such as consistency in quality and speed of delivery. CRISIL Research's definition of QSR does not include coffee chains.

Organised fast-food chains, also called quick service restaurants or QSRs, have bucked the economic slowdown and are growing by leaps and bounds.

As a result, CRISIL Research estimates the QSR market will more than double to Rs 70 billion over the next three years from Rs 34 billion in 2012-13.

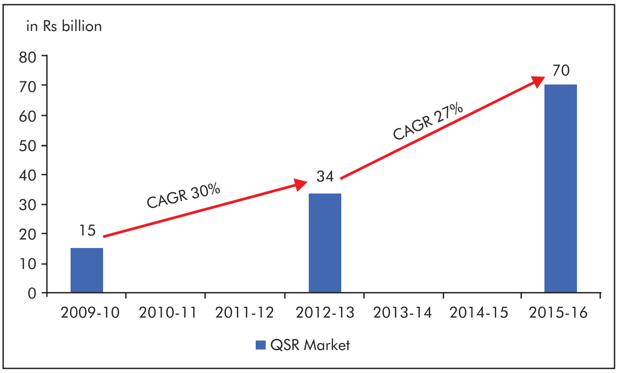
And what would be the secret sauce of success? Rapid store additions in Tier II and III cities by established foreign players and increased access to outlets multiplying consumption.

On the flip side, the downturn and increasing competition (especially in Tier I cities) will lead to much slower same-store sales growth.

Quick Service Restaurants market to grow two-fold in the next three years

The entry of McDonald's in 1996 marked the beginning of the QSR concept in India. Many global brands have followed suit since then, either through company-owned stores or the franchisee model, or a mix of both. Over the past 5-6 years, many Indian QSR brands have also mushroomed across the country, serving either foreign cuisine or adapting Indian cuisine to the fast food service format. This helped the Indian QSR market to expand rapidly to about Rs 34 billion by 2012-13. CRISIL Research expects this strong growth to continue over the next three years, as global brands expand into smaller cities. We expect the QSR market to reach a turnover of Rs 70 billion by 2015-16, growing at an average annual rate of about 27 per cent.

Growth in Indian QSR market



Source: CRISIL Research

Growth to be higher in tier II markets

CRISIL Research has separately analysed per-household spends on organised fast food or QSRs for the tier I and tier II markets (together, these markets account for about 85-90 per cent of the QSR industry's revenues). Interestingly, on an average, a tier I middle class household spends about Rs 3,700 per annum for eating at QSRs. This roughly equates to about 12 pizzas per household per annum. However, the next phase of growth will revolve around tier II cities. Annual spends on QSRs by middle-class households in these areas are expected to surge by 150 per cent to Rs 3,750 per annum over the next three years. In comparison, annual spends in tier I cities are expected to increase by more than 60 per cent to about Rs 6,000 by 2015-16. The quantum jump in QSR spends in urban areas will be propelled by an increase in nuclear families and working women, steady growth in incomes, changing lifestyle and eating patterns, and more importantly, greater accessibility of QSR outlets.

QSR spend per urban middle class household in Tier I and Tier II cities

Tier I (8 cities)	Tier II (31 cities)
25.5 QSR spend in tier I cities RS billion	5.1 QSR spend in tier II cities RS billion
÷	÷
6.8 Total tier I middle class households million households	3.4 Total tier II middle class households million households
=	=
3700 QSR spend per household Rs per annum	1500 QSR spend per household Rs per annum

Source: CRISIL Research
Note: Middle class has been defined as households having annual income in excess of Rs 200,000.

Foreign cuisine more adaptable to QSR format

Foreign cuisines dominate the menus in quick-service restaurants; easy adaptability to the cold storage format and their quick-to-serve nature has made them more amenable to the QSR market. Currently, pizzas, burgers and sandwiches together account for about 83 per cent of the total QSR market.

In comparison, it is more difficult to adapt Indian food, which is prepared through complex processes using several ingredients, into an assembly line production model. This is reflected in the lower market share of Indian cuisine in the QSR market. However, efforts are underway by domestic players such as JumboKing and Goli Vada Pav to successfully implement the quick-service model to domestic cuisines.

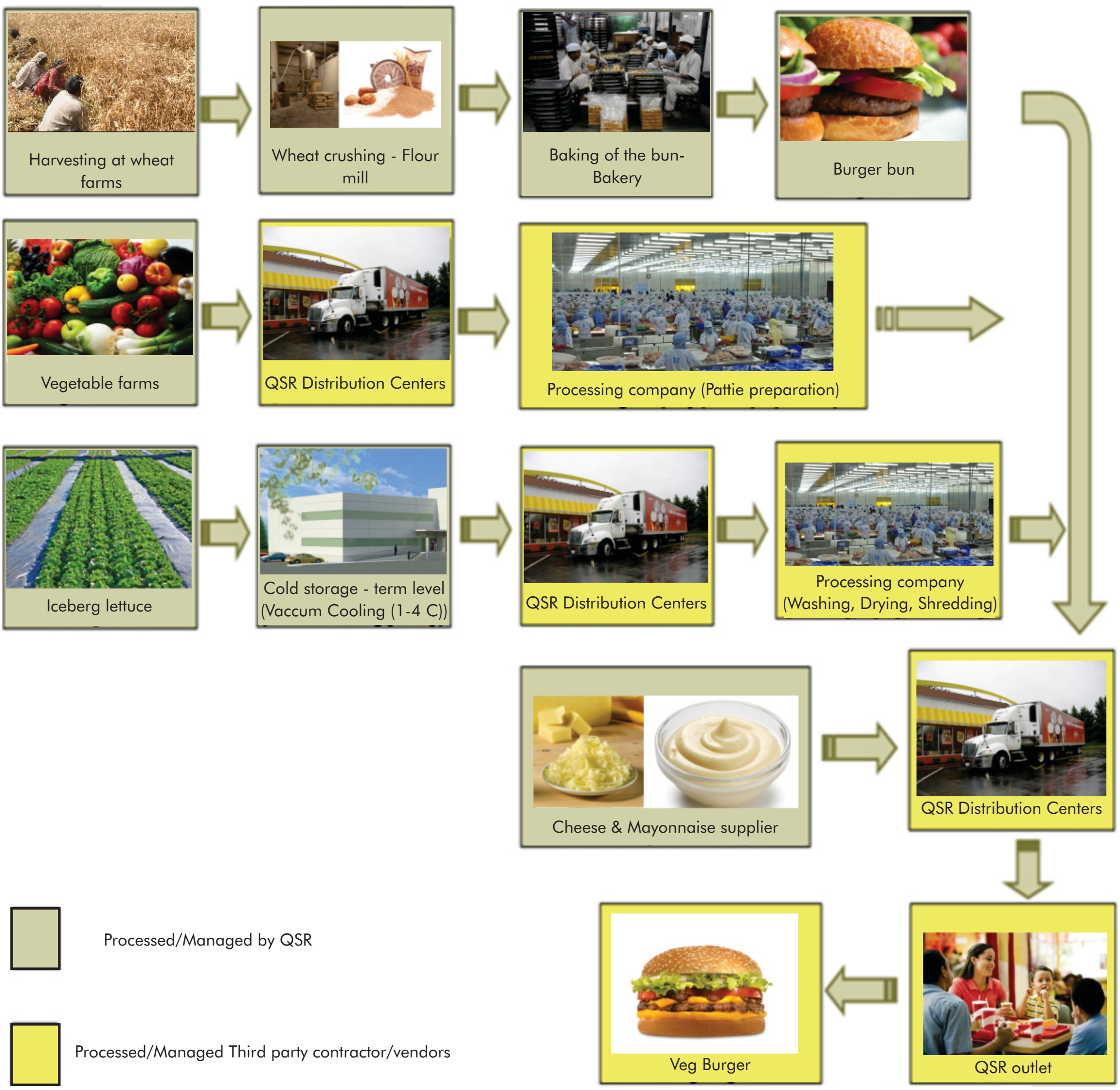
Robust supply chain management ensures quality and consistency

Strong backward integration is a must for consistency, quality, efficiency and brand establishment

Given the perishable nature of food and beverage products, losses in the form of wastages can be very high. It is, therefore, very critical for QSRs and coffee chains operating a huge network to establish a robust back-end infrastructure and ensure an efficient supply chain. This section provides an overview of the various stages that go into the making of a vegetable burger, including the complete process flow and the various stages of value-addition.

In order to maintain quality and consistency across locations, QSRs and coffee chains enter into contracts with the suppliers of food and beverage items and processing companies. For instance, McDonald's sources ingredients required for its products from different suppliers, whether in the raw form (e.g. lettuce) or in the processed form (e.g. bun, vegetable patties, mayonnaise, cheese etc). Similarly, in the case of coffee, certain coffee chains have contracts with roasters from where they source the roasted coffee beans, while few chains have their own plantations from where beans are sourced, roasted and then ground at the coffee outlets (e.g. Cafe Coffee Day).

To better understand this subject, CRISIL Research has outlined the complete process flow and stages of value additions in the making of a vegetable burger.



Source: CRISIL Research

Process involved in preparation of a burger

It is interesting to note that the ingredients used to prepare a single burger, are procured from different suppliers, depending on the nature of each ingredient and its shelf life. These ingredients are procured at a regional, centralised distribution centre, from where they are forwarded to individual outlets that operate in neighbouring areas. The perishable nature of these ingredients necessitates heavy investments in cold storage centres as well as refrigerated vehicles.

02 Perishable Value Opportunities

-Mr. Devangshu Dutta, Chief Executive, Third Eye Sight

He is chief executive of Third Eyesight, a consulting firm focused on retail and consumer products sectors.

The old saying goes: where there are issues, there are opportunities. By that standard, the perishable commodities supply chain offers plenty of issues and, hence, opportunities.

Part of the problem, or opportunity, is that there are so many steps between the farmer and the consumer, so many hands through which the produce passes, especially in the case of India. With every step in this supply chain, there is the potential of waste and deterioration with time, and on the flip side, there is also an opportunity to add value and improve.

Misalignment on Motivation

One core issue, at the heart of most problems with the perishables supply chain, is widely different perspectives and the lack of alignment.

For instance, there is competition at the basic level between cities and villages. But there is even misalignment between the development needs of ever-growing cities that are taking over neighbouring agricultural lands, and the need to feed people living in those very cities. Similarly, the motivations for small sustenance-driven landholders are different from those of the wealthier farmers with large holdings. And, of course, within the supply chain, the tug of war is between consumer vs retailer, retailer vs brand, brand vs producer.

This is but natural in any economy, even more so in India whose rapid growth is widening the already existing gaps and intensifying the inherent disconnects.

Given that we have been discussing "value-addition" as a driver for the food supply chain, I think we also need to understand that the word value has various connotations and implications, depending on who we are speaking about.

Misalignment on Value

However, there is also another significant potential misalignment, of which we need to be keenly aware. This is in the very definition of value. Given that we have been discussing "value-addition" as a driver for the food supply chain, I think we also need to understand that the word value has various connotations and implications, depending on who we are speaking about.Given that we have been discussing "value-addition" as a driver for the food supply chain, I think we also need to understand that the word value has various connotations and implications, depending on who we are speaking about. Each throws up different challenges, and needs to be dealt with differently.

In my mind, the three aspects of value related to the food sector are:

- Calorific
- Nutritional
- Economic

The complication is that these three aspects address three very different audiences in society.Most companies engaged in or being encouraged to participate in the food supply chain do so through food processingFor a large part of India's population, simply providing adequate calories is the main problem. For this chunk of people, not only do we need to have more productive land under use, we need to maximise the output from each piece of land, and ensure that the productive output reaches the population that needs it the most. Within that, there are several social, political, logistical and economic challenges to tackle: clarity of land-holding, availability of arable land to agriculture rather than non-agricultural uses, unit area productivity with efficient use of other resources, safety during transportation and storage, and distribution at prices that are affordable.

Nutritional value is the next step up: packing more nutrients into each gram of produce and delivering the right mix and balance is a critical issue for consumers who get enough calories, but can benefit hugely in physical and mental health through the quality of the nutrition they are taking in.

In pushing up both calorific and nutritional value, we also run into two entirely different debates.

One is whether genetic modification (GM) is desirable. The argument against GM foods is that we shouldn't tamper with the most basic building blocks of biology, because we don't understand the implications completely. The powerful argument for GM is that it is a must, to ensure that we have enough and everimproving food available to a growing population.

The second debate is about organic produce. The organic camp believes strongly that organic is better, nutritionally superior. The other side argues that organic delivers no clear demonstrable increase in either calories or nutrition, and instead pushes production down and prices up: a recipe for complete disaster in a growing country.

But most interesting to me is the fact that in most industry platforms such as this, when we speak of “value-addition”, it is neither calorific nor nutritional value that is being targeted, but only economic value.

Obviously, companies are profit-driven by their very nature, and if calorific or nutritional value does not deliver economic value to them, they will not focus on those aspects. For that reason, most companies engaged in or being encouraged to participate in the food supply chain do so through food processing: the transformation of the basic produce into a manufactured packaged product with higher economic value per gram. A thinking consumer may be tempted to ask, am I getting proportionately better food (especially more nutrition) for the extra unit value that I am paying for orange juice (as compared to oranges), ketchup (as compared to tomatoes) or chips (when compared to potatoes)?

I think the correct way to look at the issue is not just in terms of value-lost, but in terms of opportunity lost

My concern is that such a deep misalignment in the definition of value can cause a huge amount of friction and potential politicisation, especially if only one aspect of “value-addition” is constantly in focus.I think the correct way to look at the issue is not just in terms of value-lost, but in terms of opportunity lost

Misalignment on Losses

I'd also like to briefly comment on another aspect of value: losses.

We've all come across the much-quoted “fact” that in India 30-40% of the agricultural produce is wasted. That's incredible! A country otherwise so frugal pushes a third of its valuable food into the gutters? Can that really be true?

I have not come across any authoritative study that clearly demonstrates that India actually wastes that much food.

Of course, there is wastage due to improper harvesting, lack of post-harvest processing and gaps in the storage and transportation infrastructure. But that figure, depending on what product and part of country you pick, varies hugely and the overall average is nowhere close to the 30-40% figure.

Overestimating the size of the problem leads to overestimation of the opportunity, and that misdirects investment. I think the correct way to look at the issue is not just in terms of value-lost, but in terms of opportunity lost. There is certainly an opportunity for farmers to grow their incomes by ensuring that better agricultural and post-harvest techniques are followed. If harvesting products at the right time, chilling the produce at the farm immediately, adequate sorting and grading, or even the simple act of washing can lead to higher prices for the farmer, I'm all for it.

The opportunities we are missing may be bigger than the waste that we imagine.

The Drivers of Value

Obviously, the technological, political and business mandate changes dramatically, depending on where we want to focus on building value. Is it to increase, improve, protect or change the produce? Are we going to focus on the seed, on growth, on harvest and post-harvest, on processing, on storage, on packaging or marketing.

Given the diversity of the questions, I think the discussion on value should also include – openly – a widely inclusive group. Obviously large corporate retailers, brands and producers, and the various arms of the government would be part of the discussion, but the table should also have room for farmers of every hue, technology innovators that address not just aggregated large land-holdings but also small farms, and platforms that encourage both ultra-modern and traditional knowledge, both from within India and outside.

By focusing on an over-simplified view of “value-addition”, we risk not addressing fundamental issues. In fact, we could be losing sight of humongous opportunities.

Mr. Guide says: *In the food supply chain, we are dealing with a product that is perishable; given our economy's rapid transformation, the opportunities are perishable, too. We should get cracking.*

QSR Supply Chain -Execution & Experience

JIT in Fast Food

03

-Mr. Sriram, Director-National Supply Chain, McDonald's

Mr. Sriram is heading the Supply Chain Department at McDonald's. He is the driving force behind the energetic team of McDonald's.

Any QSR to succeed, it has to have best in class Logistics & Supply chain management Model, ever so difficult in India for serving the food hot, fresh and Just In Time (JIT)..

McDonald's, the world's single largest food service retailer, has a distinctive supply chain system.

The McDonald's restaurant at Andheri (west), Mumbai, overflows with people. Droves of customers surge into the restaurant and quickly fall into a fast moving queue before the food counter, where they are served by neatly attired restaurant staff. The popular fast food, including tempting offers from the newly launched Mcspicy range, is swiftly placed on clean trays along with Cokes of varying sizes. Customers' bills curl up from credit card swiping machines, with the entire operation marked by quickness of service and efficiency. This Quick Service Restaurant chain (QSR) promises its customers a one-minute guarantee of service, which is amply evident by the speed of operations at the outlet.

"McDonald's is a limited menu restaurant," remarks Sriram, Director-National Supply Chain, Quality Assurance and Product Development, "and our work is characterized by speed of operations." This ubiquitous restaurant chain, which is a byword for fast food, is present in 119 countries globally. In India, the first outlets of the chain threw open their doors to the public in Delhi and Mumbai in 1996 within one month of each other. McDonald's India is a leader in the food retail space, with a presence of more than 330restaurants serving more than 245 Mn customers annually in India.

Largest Food Retailer

Internationally, McDonald's is considered the largest food service retailer in the world. The first restaurant was established in 1955 in Des Plaines, Illinois, USA. McDonald's is the world's leading food service retailer with more than 34,000 restaurants in 119countries serving more than 69million customers each day. The informal dining-out industry in India is estimated at $93billion.A large part of the informal dining out industry is dominated by the road side vendors. Casual dining and quick service restaurants (QSRs) account for 70% of the organized segment in the informal dining out, while pubs, bars, clubs and lounges (PBCL) form 12%, cafes take 8% share leaving the rest with fine-dining and frozen dessert outlets.

Including its restaurant staff, McDonald's India employs a sizable complement of staff numbering over 9,000 people. But its unique and intricate supply chain network is managed by the austere figure of just six people across the country! "That figure of six people includes me," says Mr. Sriram in a calm and unfazed manner. "And if you include the Quality Assurance and Product development team, then there are just eleven people handling McDonalds' supply chain all over India!"

No Frills Logistics

The supply-chain network of McDonald's is indeed sui generis: 100 percent outsourced, lean with no back-up staff and no frills. "This is not just how McDonald's operates in India," explains Mr. Sriram, "this is how McDonald's works everywhere. So although we are growing at 30 percent-40 percent every year in India, I don't think we will increase our supply-chain staff for the next two or three years.

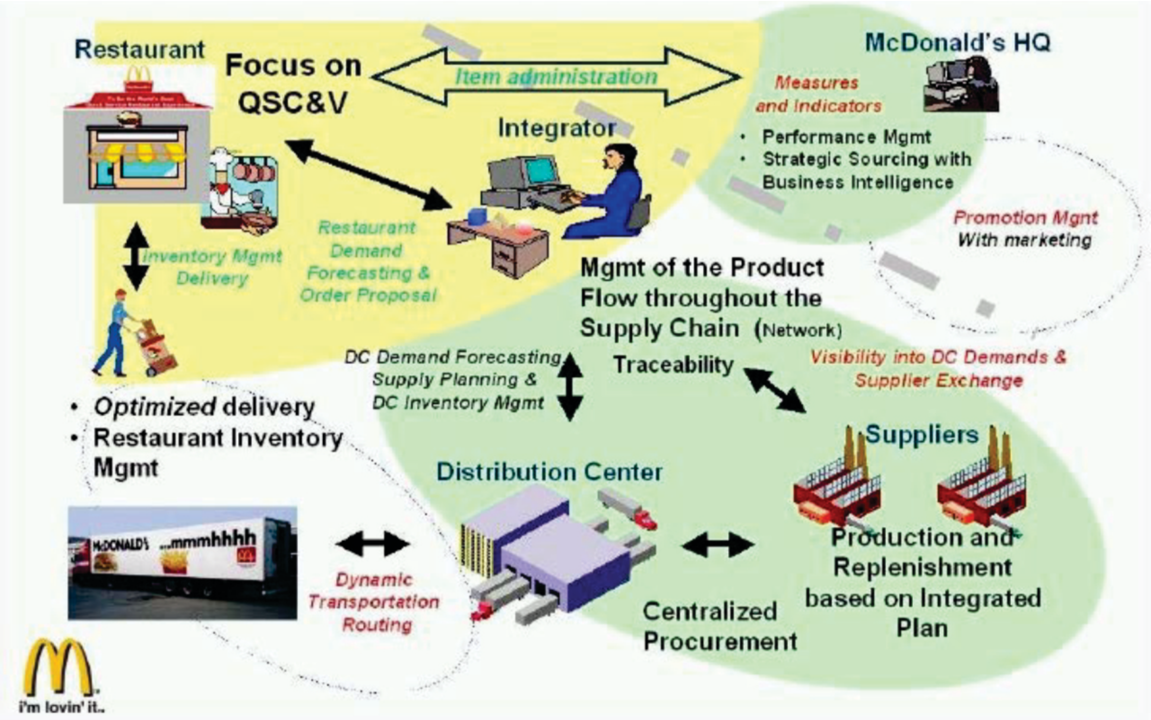
Before McDonald's launched its first outlets in India in 1996, much groundwork was done to ensure the smooth efficiency of its restaurants. From 1990 onwards, special teams arrived from the United States to check the effectiveness of India's logistics industry, the reliability of its transport sector, etc. Much work was done to put together a supple and efficient supply-chain which, despite India's infrastructural challenges, would satisfy McDonald's expectations on assured supply, costs and world class quality.

"It took close to six years for the company to set up its entire supply chain," reminisces Mr. Sriram.

"It took close to six years for the company to set up its entire supply chain," reminisces Mr. Sriram. "We had to develop special menus for India. Worldwide, McDonald's is known for its beef burgers. But in India, which is known for its religious sensitivities, a special effort was made to create new menus without beef and pork. About 60 percent of India's population is vegetarian, so we had to devise new vegetarian recipes for this segment. It took about six years not only for our supply-chain to be set up, but also to put the right products in place for serving in our restaurants."

Farm To fork

While the supply chain of McDonald's at first glance appears simple, its diverse components are both critical and multi-layered. Food ingredients are supplied by two categories, Tier-I and Tier-2 suppliers. Tier-2 suppliers comprise growers and processors who include importantly, lettuce and potato growers, poultry farms and companies which manufacture coating systems that coat the vegetable and chicken patties. The



Supply chain model of McDonald's

The transportation of McDonald's has been completely outsourced and since 80 percent is refrigerated truck movement, the company has in effect a dedicated fleet which transports their goods.

ingredients are supplied to Tier-I suppliers who process them, for instance, into vegetable and chicken patties — this is done by Vista Processed Foods Pvt. Ltd. — or potato products like French fries and hash browns which are expertly churned out by McCain Foods India Pvt. Ltd.

The products are then transported in a dedicated fleet of refrigerated trucks to the company's Distribution Centers. Multi-temperature and single temperature trucks then transport the fast food swiftly to the 330 plus McDonald's restaurants across the country. The supply-chain of McDonald's has also been expertly devised to include the significant aspect of return logistics. Says Mr. Sriram: "We have a component of return logistics in our supply chain setup. Our buns are transported in plastic crates from the bakery to the distribution centers and from there on to the stores. These crates have to go back to our bakery for the next cycle of dispatch to stores -this is where return logistics comes in. This entire end to end distribution and return logistics is managed by our distribution center together with the bakery."

The fast food chain has four Distribution Centers across the country to serve its 330 plus restaurants. The DC's have segued seamlessly with the vision of the company which has embarked on a period of roller coaster growth, with one McDonald's outlet being opened every week in the country! The company has DC's in Kundliand Mumbai which are the primary Distribution Centers. The other two Distribution Centers are in Bengaluru and Kolkata and are housed in leased properties. The supply-chain of the fast food chain is in effect a hub-and-spoke model because these DC's act as hubs. The transportation of McDonald's has been completely outsourced and since 80 percent is refrigerated truck movement, the company has in effect a dedicated fleet which transports their goods.

Outsourcing All The Way

The success of the supply-chain model of McDonald's can be directly attributed to its unique concept of outsourcing work. Unlike other corporate heavies, the company has a 100 percent outsourced supply chain. "McDonald's believes in the concept of outsourcing to subject matter expert companies," says Mr. Sriram earnestly, "and then monitor their performance ,using Key Performance Indicators (KPIs) that ensure consistent delivery against the McDonald's expectations on assured supply, cost and quality. This is how McDonald's operates not just in India, but everywhere."

McDonald's has around14 core suppliers who supply directly to the fast food chain and they are known as Tier-I suppliers.

Underlying the suppleness of its supply-chain are three principles to which the company adheres unwaveringly, the principles of trust and collaboration between the company, the owners or operators,

and the suppliers. “It’s like a three-legged stool,” explains Mr. Sriram patiently. “Each leg (principle) has to be equally strong so that there’s no collapsing foundation.” McDonald’s also believes in a culture of partnership and transparency with its suppliers. He says: “We have 100 percent transparency in everything that we do which is very critical for us when we work with our suppliers. You will find our most confidential plans with our suppliers and we expect similar transparency from them.”

McDonald’s has around 14 core suppliers who supply directly to the fast food chain and they are known as Tier-I suppliers. The other suppliers forward ingredients to the Tier-I suppliers first and they are termed Tier-2 suppliers. The fast food chain has a total of 40 suppliers from whom it sources its ingredients. Most of the suppliers are local, but some are internationally famous foreign brands like McCain Foods India which set up shop in India when McDonald’s ventured into the fast food business in the country.

For a McDonald’s supplier the terms of work are rigorous. A company’s stellar credentials are not enough; the supplier’s job does not end when the product leaves his premises, rather it ends only when the customer consumes it. McDonald’s expects its suppliers to personally ensure the quality of their products to skirt the risk factor. Suppliers like Coca Cola which is McDonald’s beverage partner also, for instance, take water management classes in its restaurants to ensure potable quality of drinking water.

Keeping the Faith

The fast food chain sells 30 or 35 independent SKUs at its outlets. But with various combinations (a meal can be small, medium or large, while a Coke can also be sold as regular, medium or large), there are 100-150 SKUs which are sold to customers. Having limited SKUs, unlike other restaurants which have hundreds of items on their menus, has skillfully converted McDonalds’ supply-chain into a streamlined system of operations in various ways—there is speed of service with a one-minute guarantee of service as the number of items on the menu are limited and sourcing ingredients becomes infinitely easier since there are fewer products and suppliers to deal with.

“I have 40-50 vendors across the country, but 80 percent of the buy comes from just 14 core vendors,” reveals Mr. Sriram.

“I have 40-50 vendors across the country, but 80 percent of the buy comes from just 14 core vendors, which helps in building scale economies and therefore improves supply chain efficiency,” reveals Mr. Sriram. Even when a new product is launched, the existing vendor is given the first opportunity to produce it; it is only when the vendor is unable to fulfill the demand that a hard slog begins for a new supplier.

Sole Distribution Partner

McDonald’s products are distributed by their LSP partner, which is the only distribution partner of the fast food chain. It manages the four DC’s and since it has a transport division, handles the truck movement in the supply-chain right through the country. McDonald’s expects its distribution partner to meet its standards of ‘cold, clean and on-time delivery.

Their LSP expertly manages the mundane day-to-day activities of the fast food chain like raising purchase orders to suppliers, invoicing, keeping an astute eye on working capital management, timely delivery, payments, etc. “They are like a one-stop shop for my restaurants,” says Mr. Sriram candidly. “Anything that is required, from a bulb that needs to be changed in a restaurant to training material, is sourced directly from LSP only buns are sent directly to the restaurants. Buns have a limited shelf life, hence they are sent directly to the outlets.

The fast food chain carefully calibrates the performance of its distribution partner, measuring it against its own KPIs to ensure its performance does not dip below its own exacting standards. The DC’s are assessed on several factors like administration efficiency—the total number of cases managed per man hour, warehouse efficiency, overtime as a percentage of the total number of hours worked and in the case of transportation, the number of cases handled per trip, truck utilization, etc. McDonald's constantly scrutinizes the performance of their LSP against these KPI's; if its distribution partner is unable to meet certain benchmarks, together they devise solutions which would enable them to achieve set goals.

Through Cold Chain

A marked feature of McDonald's supply-chain is that the entire network consists of movement of goods through a cold chain. In effect, the suppliers are also a part of this cold chain and in certain cases, for instance, the lettuce growers, the cold chain begins with the Tier-2 suppliers. "We have the largest refrigerated movement of products in India," says Mr. Sriram proudly. An interesting and innovative feature of this cold chain is that the same truck can carry products at different temperatures, ranging from *frozen products at -18C to -25C, chilled products from 1C-4C and dry products at ambient temperatures.*

Apparently, McDonald's is the only company whose supply-chain network is characterized by this successful experimentation.

As the store numbers and distances increased, the LSP together with McDonald's worked out a design of multi-temperature vehicles which could carry all three temperature products. Truck containers were made with two side doors in addition to the rear door. The side doors are used to unload products without disturbing the products in the other temperature zones. This finesse and attention to detail has helped McDonald's achieve its own USP of 'quality, standards of service, cleanliness and value.' It will also help the fast food chain fulfill its own professed target of launching 40 outlets across the country every year!

> *McDonald's has devised the 31Q system—3 stands for the three years that the fast food chain will keep checking its plans, 1 represents the detailed forecast of the next year and Q symbolizes the quarterly monitoring of these forecasts.*

McDonald's efficiency and effectiveness are also due to the fact that it has a 'pull-supply' chain. The restaurant issues orders to the Distribution Center basis a fixed cycle and the Distribution Center in turn, manages the entire Materials Requirement planning(MRP) process that ensures optimal inventory at the DC's as well as ensures assured supply at all points of time to the stores. The suppliers also manage their working capital with optimal inventories basis the feed from the DC on demand; only if there is a contingency, like the overhaul or servicing of machinery, will the supplier produce surplus stocks. With all of the above, the fill rate to store is 99.8 percent.

Forecasting Demand

Equally impressive is the accuracy of the demand forecasts. The restaurants give a three-day to one-week forecast to the Distribution Center. The DC, in turn, has a three-month rolling forecast with the suppliers which enables them to plan their production schedules meticulously. For extensive long-term planning, McDonald's has devised the 31Q system—3 stands for the three years that the fast food chain will keep checking its plans, 1 represents the detailed forecast of the next year and Q symbolizes the quarterly monitoring of these forecasts. While preparing his annual budget, Mr. Sriram includes his suppliers in the budgeting process, briefing them on the new products and restaurants to be launched.

Using this information, the suppliers roll out their production schedules. The schedule for the next year is carefully fixed and then stringently monitored. Once the forecasts are closed and the budgets fixed, the plan schedules and performances are monitored every quarter, also to ensure that there is no dip in performance.

With 330 plus restaurants scattered across the country, lead times for delivery assume critical importance. But McDonald's supply-chain network is everything its cracked up to be—each cog in the wheel is set precisely in place to ensure spot on distribution. Every restaurant manager knows the exact time of arrival of each product which enables the supply chain team to work backwards to ensure timely distribution.

"We have fixed locations of suppliers and restaurants and our fleet of dedicated trucks and cleaners," says Mr. Sriram energetically, warming up to his subject. *"We can fairly predict the amount of time it takes for a product to reach from an X location to a Y location, give and take some allowances for transit delays due to unavoidable circumstances."* If a truck takes four or five days to travel between a supplier's premises in Taloja, Maharashtra, to Noida in the National Capital Region, dedicated McDonald's trucks will accomplish it in two to three days due to non-stop running of the fleet. "This ensures that the lead times for the trucks and deliveries is pretty much predictable," points out Mr. Sriram. With a maximum inventory of ten days in its system, McDonald's maintains an efficient inventory turn ratio of 36.

Food Safety

While the mechanics of supply chain is critical, equally important is food safety. McDonald's adheres to the Hazard Analysis Critical Control Point (HACCP) system which ensures food quality. This is an industry level certification which officially approves all the suppliers of the fast food chain. But apart from HACCP, McDonald's has also devised its own food safety systems, the Supplier Quality Management Systems (SQMS) and the Distributor Quality Maintenance Program (DQMP). The SQMS is a worldwide mandate for all McDonald's suppliers and includes essentials of the HACCP control system, ISO standards etc, while also contriving several principles of its own. These systems are applicable to processing and manufacturing plants. The DQMP audits and checks the warehouses of the chain.

McDonald's trains auditors worldwide on its SQMS and DQMP programs. Independent auditors then audit plants and warehouses and allot scores to McDonald's facilities globally, thus ensuring that the food leaving its processing plants and warehouses if of the highest safety standards.

Every batch of a food product that gets manufactured at a supplier's plant is checked by an approved sensory panel at the plant. Scores are allotted to the product and only if it scores above a certain percentage, is it shipped out of the factory.

Tastes Like Mac

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sensory panel at the plant. Scores are allotted to the product and only if it scores above a certain percentage, is it shipped out of the factory.As critical as safety is the taste of the food products "because a customer who is walking into McDonald's is not coming to eat certificates!" says Mr. Sriram bluntly. "He is coming there because he likes the taste of the product." To keep an assiduous check on the taste of its products, McDonald's runs a Sensory Program. It has a centralized laboratory in Hong Kong which trains sensory experts. Special personnel are nominated both from the suppliers' and Quality Assurance teams of McDonald's to attend the training program.

Every batch of a food product that gets manufactured at a supplier's plant is checked by an approved sensory panel at the plant. Scores are allotted to the product and only if it scores above a certain percentage, is it shipped out of the factory. Another level of control is that every month members of the suppliers' and McDonald's Quality Assurance teams select an outlet at random and carefully inspect the quality of the food products. Also, every quarter or half year, members of the management do a 'product cutting' with key suppliers—fry a product, check its taste and allot scores—to check if the product scores are moving in the right direction northwards. And lastly, samples of the products that are manufactured in the country are shipped to the central laboratory at Hong Kong at specified intervals, which evaluates the products.

Tech Prowess

The supply-chain network of McDonald's, which appears to work effortlessly, is powered by various IT systems which enhance its effectiveness. Software like SAP, RAMCO Marshell ERP etc are being used. These systems are used to directly upload store orders." At the restaurant level, the fast food chain has in-house developed technologies which track day-to-day sales, enables restaurants to schedule staff and send forecast orders to DCs. "These are our proprietary technologies," remarks Mr. Sriram. "The next phase that we are looking at is connecting our DCs to our suppliers through these systems."

Despite ballooning levels of growth, McDonald's added Mcdelivery, an innovative option which delivers meals to the customer's doorstep.. Mcdelivery was first launched in Mumbai and Delhi in 2004. The service is now offered in more than seven cities in the country. Does it burden the existing supply chain network? Mr. Sriram shrugs nonchalantly. "Why should it? It does not add much to our planning cycles. The more I sell, the more economies of scale I get and it helps to keep my supply-chain more efficient."

The Challenge

Mr. Sriram is passionate about the supply-chain of the company, but he now tries to gaze into the proverbial crystal ball, seeking the future of McDonald's. With its escalating growth, Mr. Sriram realizes that "we need to add more capacity to our supply chain, but will I be able to do it without creating white elephants? Also, with our supply-chain set to grow, we may need a fifth DC. If so, where? We keep consistently working on

network optimization to ensure that capacity is added at the right place at the right time to ensure that capacity addition happens at optimal costs."

However, despite the maze of uncertainties, the only future of McDonald's is up.

Mc Donald's Fast Food Restaurant JIT

At Mc Donald's Fast Food Restaurant, strategy of Just in time has been applied and has brought many benefits to the organization and added value to the organization. This just in time system has helped in reducing the costs by drastically cutting down on inventory levels and wastages.

Previously at Mc Donald's Fast Food Restaurant the process was a batch process, where products would be made ready and held in a hot bin before serving to customers Products could be held only as per the specified holding time to ensure the " Hot and Fresh" promise to the customer. In order to cut down on waste as well as ensure raising the bar on the " Hot and Fresh" promise, McDonalds moved to the " Made for You(MFY)" format, where the product is made only after the customer has placed the order with the front counter. For this, extensive staff had to be hired to quickly prepare the burgers and training had to be given. It looked expensive in the short term but it reduced the wastages drastically and helped Mc Donald's excel at customer satisfaction in the longer term.

A lot of advantages were brought in by this JIT method:

1. Improved Quality – The burgers are prepared freshly and hence the quality has improved.
2. Customer service – As the burger is made only after the order is placed, making special orders is not an issue.
3. Cost Reduction – Due to significant reduction in wastage as uncooked material has a higher shelf life.

Mr. Guide says: *This strategy was the first attempt to bring JIT manufacturing techniques to service industry. It was the 'Made for You' strategy and also helped Mcdonalds in setting up demonstrative kitchen techniques which is a unique aspect and is its USP.*

04 Indian Fast food: Fast Growth for Cheap Eats

-Mr. Ankur Sharma, Head-Distribution, FAASO'S

He is heading distribution function at Faaso's & has taken up the challenges to establish smooth distribution operations in a complex & competitive Indian market.

Managing tasks in a QSR through supply chain helps maintain the food and beverage supply network and ensures smooth operations as well as product-level consistency.

The growth of the food services market has led to a centralised procurement system by national well as international brands, backed by a strong supply chain network. In the past decade, there is emerging rapidly a modern-sector cluster of food logistics, distribution, and wholesale companies in India.

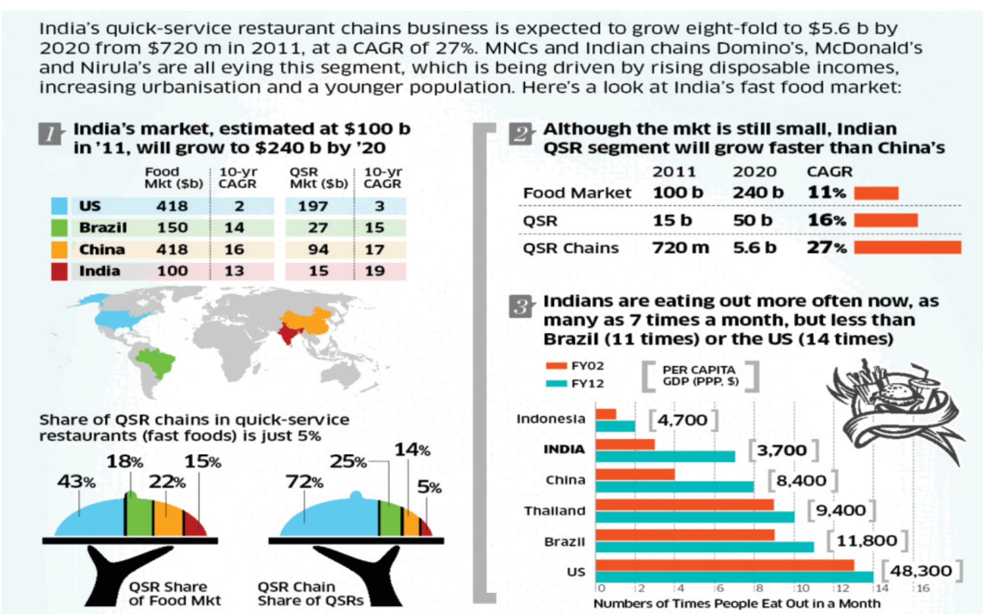
First, modern food retailers in India are increasingly shifting toward the use of modern logistic and wholesale companies (and direct sourcing from manufacturers, as discussed earlier) and away from sourcing from traditional stockists and general-line wholesalers. This is especially true for processed, refrigerated semiprocessed and fresh food. In this sense, the food retailers are following a general trend that has been seen elsewhere in Asia and globally. Retailers do this in order to cut transaction costs, increase consistency of quality, and meet quality and safety standards and regulations. In the longer run in India, this change can have the same effect observed elsewhere of accelerating the tendency to consolidation in the processing, logistics, and wholesale sectors.

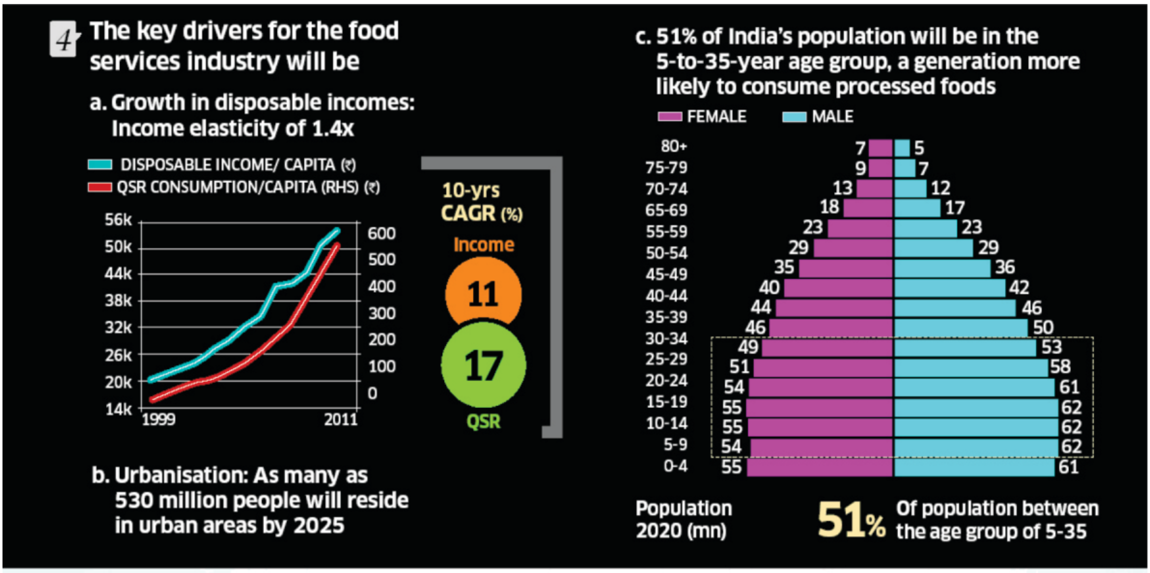
> *India's quick-service restaurant chains business is expected to grow eight-fold to $5.6 b by 2020 from $720 m in 2011, at a CAGR of 27 per cent.*

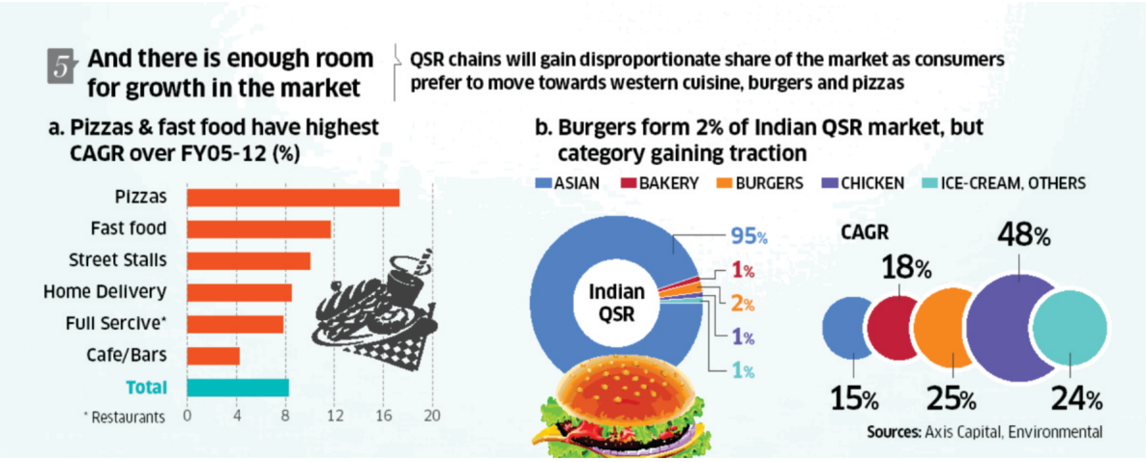
India becomes the new fast food destination

India's quick-service restaurant chains business is expected to grow eight-fold to $5.6 b by 2020 from $720 m in 2011, at a CAGR of 27 per cent.

Here's a look at India's fast food market:







India's fast-food market is growing quickly, but margins are getting tighter as restaurant costs rise. Amid an economic slowdown, it seems India's consumers will still give themselves a cheap treat. International and domestic fast-food chains are growing rapidly, catering to India's young and increasingly wealthy population. Yet with the market still dominated by small stalls, restaurant are struggling to keep prices low enough to benefit from the mouth-watering opportunities.

India also offers a wealth of young people, a key market for fast-food chains. Over 60% of India's current population is younger than 30 years old, and are welcoming of international brands. The fast food industry will benefit from other factors as well, such as increases in nuclear families, single-person households and the proportion of women in the workforce; as well as changing lifestyles and eating patterns. Foreign brands have grabbed 63% share of the India QSR market. According to the National Restaurant Association of India, over 80% of the foodservice sector is unorganised. So international companies have only taken a big share of a small pie.

A case on the print

Faaso's, which began offering its Indian wraps in 2004 now has 63 outlets, says it will grow to compete with global franchises. Plan is to have 200 outlets by end of 2015. Much of the predicted growth will come from new stores, especially in smaller cities. Over the next three years, it says new store additions will grow 16%-18% a year. Nearly half of those outlets will be in smaller cities, which currently account for 25% of total stores. Having already established their presence and strong branding in big cities, large international players are now pursuing the lower rentals, limited competition and higher growth that smaller cities offer.

Real Estate A Real Bane for QSR:

Yet as they rush to expand, fast-food companies face a menu of challenges. For one thing, their costs are rising. India's commercial real estate price growth is among the world's fastest, while high inflation is pushing up input costs like fuel for home deliveries, and food *(onion prices rose an eye-watering 245% in the past year)*. But as India's economic slowdown dampens consumer sentiment, companies must keep prices low to woo budget-conscious customers: Faaso's has not raised prices in a year to develop the market and be loyal to its customers.

> *Faaso's has not raised prices in a year, to develop the market and be loyal to its customers.*

While new stores will grow the overall industry, same-store sales growth will decline considerably. In response, companies are focusing on value and better cost management.

The biggest challenge of all is the intensifying competition, as local and international players all vie for real estate and customers, while new players like Burger King mull an entry. The hope is that the appetite of India's consumers is big enough to sustain them all.

Time Nahi hai:

"Time nahi hai" seems to be the buzzword or rather buzz-statement of today's fast moving and fast food eating generation. Be it the college goers who juggle between bunking classes, jamming sessions and parties or the suave young employees rushing between meetings and get together, paucity of time seems to be one factor common between them all.

Fast food restaurants, make food that can be prepared and served quickly. It evolved more in line with urban development. The first fast food restaurant arguably was White Castle, established in United States of America, in 1916.

The Indian fast food industry is diverse, with road side stalls and restaurants like McD, Domino's, Pizza hut, KFC etc operating on the same road. *Vada-pav and sev-puri* serve up the platter for the super fast Mumbaikars, sumptuous chicken rolls and *jhal muri satisfy* the Bengali taste buds in Kolkatta and Dilliwale have a lot of choices from their shawarmas to chaat. The past decade saw the opening of various international fast food chains in our country, first only in the metros and then gradually to other cities as well.

> *The Indian fast food industry is diverse, with road side stalls and restaurants like McD, Domino's, Pizza hut, KFC etc operating on the same road.*

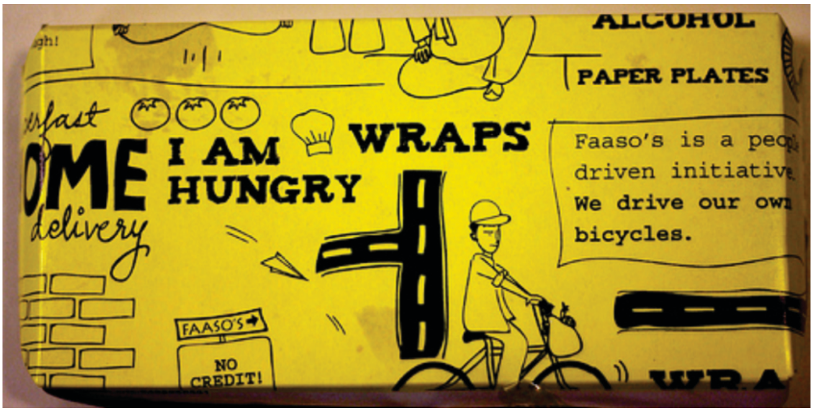
The evolution of fast food is symbolic of the rapid urbanization in our country. The fast pace of today's generation and the country's progress are in tandem and it's the fast food chains filling in for the ghar ka khana in a time crunched atmosphere.

How hard is it to raise money?

If you're entering into QSR, you're on your own to start out with. The ecosystem is nowhere close to a level where an idea will get financial backing, especially in this segment (and neither it should be). One needs to have their unit economies setup with a strong business model to seek funding. With a very strong focus on numbers and growth rates, it'd be hard to get funded if you'd want to scale up your quaint little coffee shop. The must haves for rapid growth:

i) A strong technology backend
ii) An A-Team to run the show like a star
iii) Optimized supply chain
iv) Good understanding of the market

The choice is always about keeping it a small and simple with one outlet with modest ambitions or scaling up and having multiple outlets with a great outreach. When expanding, it is very important to settle upon a model.

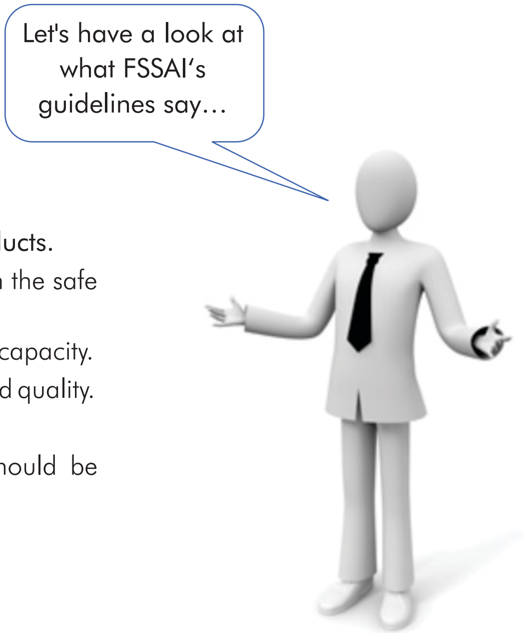


Is Funding Necessary?

Raising funds is always a debate and it definitely a final end to starting up but a QSR business needs a lot of capital infusion and a funding round just accelerates the process tremendously. With horizons opening up, views change and since the early 2000's, India has seen some chains coming up and with the availability of those crucial funds, opportunities to grow and scale are present. New investments are being made and it doesn't seem too far off before we see a global chain emerge from India.

On Unit Economies

Going forward, to build a scale QSR business nationally, the choice of cuisine is going to be very important. Indian cuisine is very much centre of the plate and over 90% of consumption is still in this category. While the taste preferences vary across geographies and some tweaks to the recipes may be required, the overall brand positioning and they needs to be consistent and have a universal appeal. A simple model based on less complexities and variables is of essence because managing operations in several cities across the country and still ensure a uniform experience and quality will be the key driver of brand building.



FSSAI's Guidelines for Bakery and Consumer Food Products.

- Permitted colours and additives should be used within the safe limits as prescribed in FSS Act, 2006.
- Baking oven should be as per ideal model with specific capacity.
- Baking pans, trays and other utensils should be standard quality.
- Chimney should be placed well above the roof.
- Food grade packing material (printed/unprinted) should be used for wrapping and packaging of food items.

From Farm to Cup: Sourcing of Coffee

-Mr. Arvind Sharma, VP-SCM, Barista

-He Looks after Logistics &SCM division of Barista and has been instrumented in establishing best & effective practices across the supply chain.

05

Light and sweet; milk, no sugar. It seems as little as 20 years ago, people cared more about how they took their coffee than where it was from and how it was grown. Now we have choices and people are more informed. But how can we be sure that we're buying ethically grown and processed coffee that does not exploit the people who produce it? With the emergence of an artisan coffee roaster on every corner and the abundance of information available, it's actually getting easier.

The two main species of coffee being used today are Robusta and Arabica, the better of the two. Robusta coffee is grown at sea level and is a much sturdier plant, yielding more fruit. Its coffee has about twice as much caffeine as Arabica.

Arabica is grown at 4,000–6,000 feet above sea level on hillsides and is a more delicate plant, making it more difficult to farm. It likes partial sun and shade, and is more susceptible to disease and drought. Robusta is often mechanically harvested, while Arabica is hand-harvested, as the cherries don't ripen all at the same time.

For the most part, the coffee industry can be separated into two sectors: large multinational companies and specialty coffee roasters.Specialty coffee roasters make up a small percentage of the industry, and they are intimately involved in the coffee process, from farming to processing to roasting. Large companies, on the other hand, buy in large quantities, making it easier for them to get what they want.

For the most part, the coffee industry can be separated into two sectors: large multinational companies and specialty coffee roasters.

It seems as little as 20 years ago, people cared more about how they took their coffee than where it was from and how it was grown.

Unfortunately, these companies sometimes pay the farmer less than the cost to produce, giving farmers few options other than to resort to unethical farming practices. This includes cheap; clearing native trees and existing landscape to plant as many coffee trees as possible; and the use of synthetic pesticides and herbicides.

There are also two main ways to source coffee: fair trade and direct trade.

Fair trade refers to buying coffee from growers at a higher price than standard coffee, providing greater economic incentives for its producers and promoting healthier working conditions. Although the fair trade movement emerged as a response to post World War II poverty, certification was not introduced until 1988. Because the supply of coffee was greater than the demand and the International Coffee Organization did not set price quotas, the market was flooded with coffee. This rendered it nearly impossible for growers to command sufficient wages to turn a profit.

It seems as little as 20 years ago, people cared more about how they took their coffee than where it was from and how it was grown.

Launched in the Netherlands, fair trade certification aimed to artificially raise coffee prices on behalf of growers. The original name of the organization was Max Havelaar, named for a fictional Dutch character who opposed the exploitation of coffee farmers. In 1998, Trans Fair USA (now Fair Trade USA), an arm of the Fair Trade Labeling Organization International (FLO), was introduced as the only fair trade certifying label in America.

Fair Trade standards seek to support the development of disadvantaged and marginalized small-scale farmers and plantation workers. The three areas of focus on sustainable development are social, economic, and environmental. To be considered fair trade sources, farmers must meet and adhere to several criteria as set by their specific certifying body:

- Organize in democratically run cooperatives subject to independent inspections
- Use sustainable methods of agriculture
- Enable pre-harvest financing for farmers who need it
- Facilitate mutually beneficial, long-term trading relationships
- Create a safe and healthy working environment and fair wages

Like any other system, fair trade has its issues and criticisms. One of the biggest concerns is the producer certification fee associated with carrying the Fair Trade logo. Therefore, the system excludes small family farmers and producers who cannot afford to form cooperatives or associations, hence cannot become Fair Trade certified.

The existence of "green washing" or "social washing"—when large corporations claim to be fair traders while only importing a small fraction of their total products actually fair trade—is another drawback of the fair trade system. Whether a company imports 1 percent or 100 percent of its products fairly, it is deemed a fair trader. Unethical companies can abuse fair trade certification by marking up retail prices significantly, while only providing the growers with marginally higher prices.

Direct trade is a form of coffee sourcing practiced by some coffee roasters, and is defined by sourcing green coffee beans directly from farmers with a varied standard between producers. Direct trade is seen as an alternative to fair trade certification and represents the interests of the roaster, as well as the farmers who might disagree with the fundamentals of fair trade.

The term was coined by roasters, who consciously eliminated the middlemen on both the buying and selling side, as well as third-party organizations that control certifications. This puts more money (as much as 25 percent more than fair trade) directly into the hands of the farmers. In return, growers agree to produce beans to the standards of the roasters, which differ from roaster to roaster.

The basic guideline for direct trade coffee is economic sustainability, with an emphasis on quality standards, social issues, and environmental concerns. Most plantations are visited once during the growing season and again during harvest. In addition to their farming practices, coffee roasters who visit the farms monitor such issues as plantation management, including the use of pesticides and herbicides; wastewater disposal; and maintenance of forest cover. Unlike with fair trade certification, most roasters involved in direct trade are flexible with their approach to labor concerns, if it is addressed at all.

Direct trade coffee is met with some criticism, as well, or at least skepticism. Many consumers wonder how they can be sure the coffee they're buying and paying more for is actually what it claims to be. They can't. But if they trust the company to stick to its own standards and they agree with those standards, then third-party certification is not necessary.

As we continue to progress as a planet and think with a more global mindset, additional types of certifications of not only coffee, but also other products like cacao, will present themselves. Consumers must choose their cause, educate themselves, and jump on that bandwagon to make a difference in the world. Whether it's milk and two sugars or fair trade from Sumatra, the well-informed choice is inevitably theirs.

In café business there are huge challenges in Indian environment including the following

1. Logistics issues are due to non understanding of importance of Food delivery of items in same temperature and shape.

2. Delivery Vans are not maintained cleanly as per the requirement of Food
3. Delivery of RM/PM becomes critical due to very less inventory at store
4. Operation commitment on sales figures is always question mark in this industry
5. Due to this there is complete accountability of Supply Chain in the whole process, it becomes more important since there is always a challenge due to shelf life and delivery of fresh food.
6. Due to delivery of food at number of locations, accountability for shortage of foods and damage of foods is always challenging.
7. One of the major challenge is Real time IT support is not there due to reason of
   a. IT software compatibility issues with POS and backend
   b. Internet speed
   c. Internet Connectivity
8. Demand planning is always a challenge since there is no real time data in terms of stock at outlet
9. In this industry you can always make profits by controlling wastage, logistics and Food cost.

Other costs are more or less stabilized in the industry.

10. It can further improve by upgrading IT support which can give us live data. It will improve further improve the whole back end process and optimize the process of planning and execution.
11. For frozen and chilled articles transportation, the operator, transporter and driver needs to be sensitized to give better results.

These are the points which are correct for the industry almost for all the brands for QSR and Café chains.

To conclude, it would be quite clear for the reader that there is indeed a gap between the Cup and Lip i.e. for the Cup to reach the lip as Coffee needs to be rightly traded/purchased for it to be right priced------especially with the demand ever increasing.

Cold Supply Chain

06 Amul's Supply Chain Management Practices

- Mr. A. K. Bansal, Area Manager-Amul

He is the force behind complex operations at Amul.

AMUL is a dairy cooperative in the western India that has been primarily responsible, through its innovative practices, for India to become the world's largest milk producer. The distinctive features of this paradigm involves managing a large decentralized network of suppliers and producers, simultaneous development of markets and suppliers, lean and efficient supply chain, and breakthrough leadership. To implement their vision while retaining their focus on farmers, a hierarchical network of cooperatives was developed, this today forms the robust supply chain behind GCMMF's endeavors. The vast and complex supply chain stretches from small suppliers to large fragmented markets. Management of this network is made more complex by the fact that GCMMF is directly responsible only for a small part of the chain, with a number of third party players (distributors, retailers and logistics support providers) playing large roles. Managing this supply chain efficiently is critical as GCMMF's competitive position is driven by low consumer prices supported by a low cost system of providing milk at a basic, affordable price.

Gujarat Cooperative Milk Marketing Federation(GCMMF)

GCMMF is India's largest food products marketing organization. It is a state level apex body of milk cooperatives in Gujarat, which aims to provide remunerative returns to the farmers and also serve the interest of consumers by providing quality products, which are good value for money. GCMMF markets and manages the Amul brand.

The distribution network

Amul products are available in over 500,000 retail outlets across India through its network of over 3,500 distributors. There are 47 depots with dry and cold warehouses to buffer inventory of the entire range of products. GCMMF transacts on an advance demand draft basis from its wholesale dealers instead of the cheque system adopted by other major FMCG companies. This practice is consistent with GCMMF's philosophy of maintaining cash transactions throughout the supply chain and it also minimizes dumping. Wholesale dealers carry inventory that is just adequate to take care of the transit time from the branch warehouse to their premises. This just-in-time inventory strategy

improves dealers' return on investment (ROI).

All GCMMF branches engage in route scheduling and have dedicated vehicle operations.

Largest Cold Chain:

AMUL has the largest cold chain network in India (i.e.more than 100000 Deep freezers) as compared to any other company. The chemical components of milk are water, SNF and solids. Milk is very perishable product so it has to be consumed within 24 hours. In order to avoid wastage

AMUL converts the milk in to SNF and milk solids by evaporating the water, which comprises up to 60-70% of milk contents. This is possible only if the distribution channel right from the producer to the consumer is well organized. It will be surprising to know that AMUL makes even the Sarpanch to eat pizza i.e. it supplies pizzas even to rural market.

The Business Model

From the very beginning, in the early 1950s,

AMUL adopted the network as the basic model for long-term growth.

The network explicitly includes secondary services to the farmer-suppliers.

Several of the entities in the network are organized as cooperatives linked in a hierarchical fashion.

Customers:

In comparison with developed economies, the market for dairy products in India is still in an evolutionary stage with tremendous potential for high value products such as ice cream, cheese etc. The distribution network, on the other hand, is quite reasonable with access to rural areas of the country. Traditional methods practiced in western economies are not adequate to realize the market potential and alternative approaches are necessary to tap this market.

Suppliers:

A majority of the suppliers are small or marginal farmers who are often illiterate, poor, and with liquidity problems as they lack direct access to financial institutions.

Again, traditional market mechanisms are not adequate to assure sustenance and growth of these suppliers.

Third Party Logistics Services:

In addition to the weaknesses in the basic infrastructure, logistics and transportation services are typically not professionally managed, with little regard for quality and service. In addition to outbound logistics, GCMMF takes responsibility for coordinating with the distributors to assure adequate and timely supply of products. It also works with the Unions in determining product mix, product allocations and in developing production plans. The Unions, on the other hand, coordinate collection logistics and support services to the member-farmers. In what follows we elaborate on these aspects in more detail and provide a rationale for the model and strategies adopted by GCMMF.

Simultaneous Development of Suppliers and Customers:

From the very early stages of the formation of AMUL, the cooperative realized that sustained growth for the long-term was contingent on matching supply and demand. The member-suppliers were typically small and marginal farmers with severe liquidity problems, illiterate and untrained.

AMUL and other cooperative Unions adopted a number of strategies to develop the supply of milk and assure steady growth. First, for the short term, the procurement prices were set so as to provide fair and reasonable return. Second, aware of the liquidity problems, cash payments for the milk supply was made with minimum of delay. This practice continues today with many village societies making payments upon the receipt of milk. For the long-term, the Unions followed a multi- pronged strategy of education and support. For example, only part of the surplus generated by the Unions is paid to the members in the form of dividends

Managing Third Party Service Providers:

Unions focused efforts on these activities and related technology development. The marketing efforts were assumed by GCMMF.

All other activities were entrusted to third parties. These include logistics of milk collection, distribution of dairy products, sale of products through dealers and retail stores, some veterinary services etc. It is worth noting that a number of these third parties are not in the organized sector, and many are not professionally managed. Hence, while third parties perform the activities, the Unions and GCMMF have developed a number of mechanisms to retain control and assure quality and timely deliveries. This is particularly critical for a perishable product such as liquid milk.

Coordination for Competitiveness:

Coordination is one of the key reasons for the success of operations involving such an extensive network of producers and distributors at GCMMF. Some interesting mechanisms exist for coordinating the supply chain at GCMMF. These mechanisms are:

Inter-locking Control

The objective for developing such an inter-locking control mechanism is to ensure that the interest of the farmer is always kept at the top of the agenda through its representatives who constitute the Boards of different entities that comprise the supply chain. This form of direct representation also ensures that professional managers and farmers work together as a team to strengthen the cooperative. This helps in coordinating decisions across different entities as well as speeding both the flow of information to the respective constituents and decisions.

GCMMF Supply chain Model:

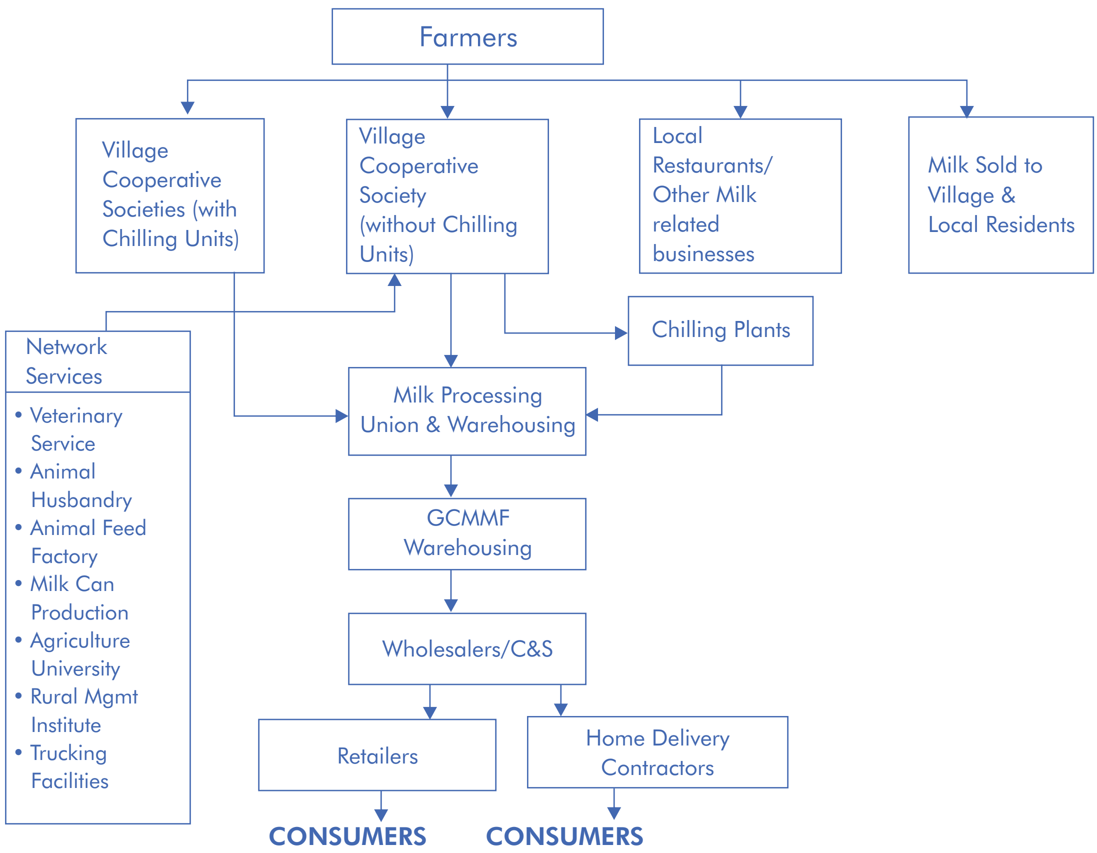
Coordination Agency: Unique Role of Federation

Its objective is to ensure that all milk that the farmers produce gets sold in the market either as milk or as value added products and to ensure that milk is made available to an increasingly large section of the society at affordable prices.

Supplier Enhancement and Network servicing

Their objective is to ensure that producers get maximum benefit and to resolve all their problems. They manage the procurement of milk that comes via trucks & tankers from the VSs. They negotiate annual contracts with truckers, ensure availability of trucks for procurement, establish truck routes, monitor truck movement and prevent stealing of milk while it is being transported.

GCMMF Supply Chain



Amul Yatra Programme

The Amul Yatra Programme ensures that every new distributor visit Anand before commencing business, thereby imbibing an appreciation of Federation philosophy and culture as well as operational systems and processes.

All new distributors salesmen are trained in the Federation's philosophy and methods as well as in selling skills.

Amul Yatra programme has been continuing to bring our channel partners to Amul to give the man exposure to our cooperative institutions. This year our emphasis was upon our newly appointed distributors and channel partners from various business segments like Organized Retail, Caterers etc.

Freshest Fast Logistics

07

-Mr. Shampayan Ghosh, DGM- Commercial & Logistics
Mother Dairy Fruit & Vegetable Private Limited, Dairy Product Division

He is looking after logistics and supply functions at Mother Dairy and taken up the challenges of delivering the right product at the right temperature and Just in Time.

The supply chain theme of Mother Dairy hinges on the simple concept of delivering the right product at the right temperature and Just in Time , maintaining price position vis-à-vis the competition and ensuring freshness of stock.

Mother Dairy manufactures, markets and sells milk and milk products under the Mother Dairy brand (Milk, Cultured Products, Ice creams, Paneer , Ghee , Yogurt etc), Dhara range of edible oils, and, Safal range of fresh fruit & vegetables, frozen vegetables, processed fruit & vegetable products, fruit pulps; and concentrates in bulk aseptic packaging and fruit juices at a national level through its sales and distribution networks for marketing food items.

Mother Dairy sources a significant part of its requirement of liquid milk from dairy cooperatives. Similarly, Mother Dairy sources fruits and vegetables from farmers/growers associations. Mother Dairy also contributes to the cause of oilseeds grower cooperatives that manufacture/pack the Dhara range of edible oils by undertaking to nationally market all Dhara products.

Having lots of products under one umbrella, only a definitive strategy for supply chain management can work..

In the supply chain system, a product hauls at different stages from the point of origin to the point of consumption, where there always remains a need for ideal storage of perishables to avoid the wastage and to preserve its freshness. The top deck at Delhi's dairy vendor, Mother Dairy, feel the same. In an affable manner, Ghosh traces the well-devised supply chain system of Mother Dairy which has not only helped it profit, but has also assisted the company to remain in competition and give a licking to the competitors on their home turf all across.

Cold chain solutions

There has been an increasing requirement of cold chain logistics from supermarkets/hypermarkets as fresh supplies are required. With growing demand for F&V and Dairy segments now-a-days all the year long, acceptance of frozen food products, ready-to-eat and high disposal income has boosted retail which ultimately has made large players develop back end infrastructure and also ensure timely delivery of fresh supplies. At Mother Dairy, Ghosh mentions, "As far as cold chain is concerned, there are two categories - frozen (Minus 18 degree) and chilled (Upto 4 -8 degree). In frozen category, ice cream and Safal frozen vegetable exists across Pan India. In chilled categories, milk, dairy products like curd, paneer, misti doi, kheer, flavoured milk, yoghurt, butter, cheese etc . handled mainly in Delhi – NCR, Upcountry Markets in North Regions, in West mainly in Mumbai – Pune territories and in East we are there at Kolkata. In South also, our products just launched at Bangalore and Hyderabad markets.

Temperature issues

Supply Chain is regarded as a crucial part of perishable products since their activities are highly temperature sensitive and Mother Dairy is not an exception either. "Post manufacturing, the finished goods are kept at the desired temperature at the warehouse, transportation and finally to the distributor. This is a pre-requisite for maintaining texture of product and ultimately sufficing customer satisfaction," informs Ghosh.

Storage and transportation

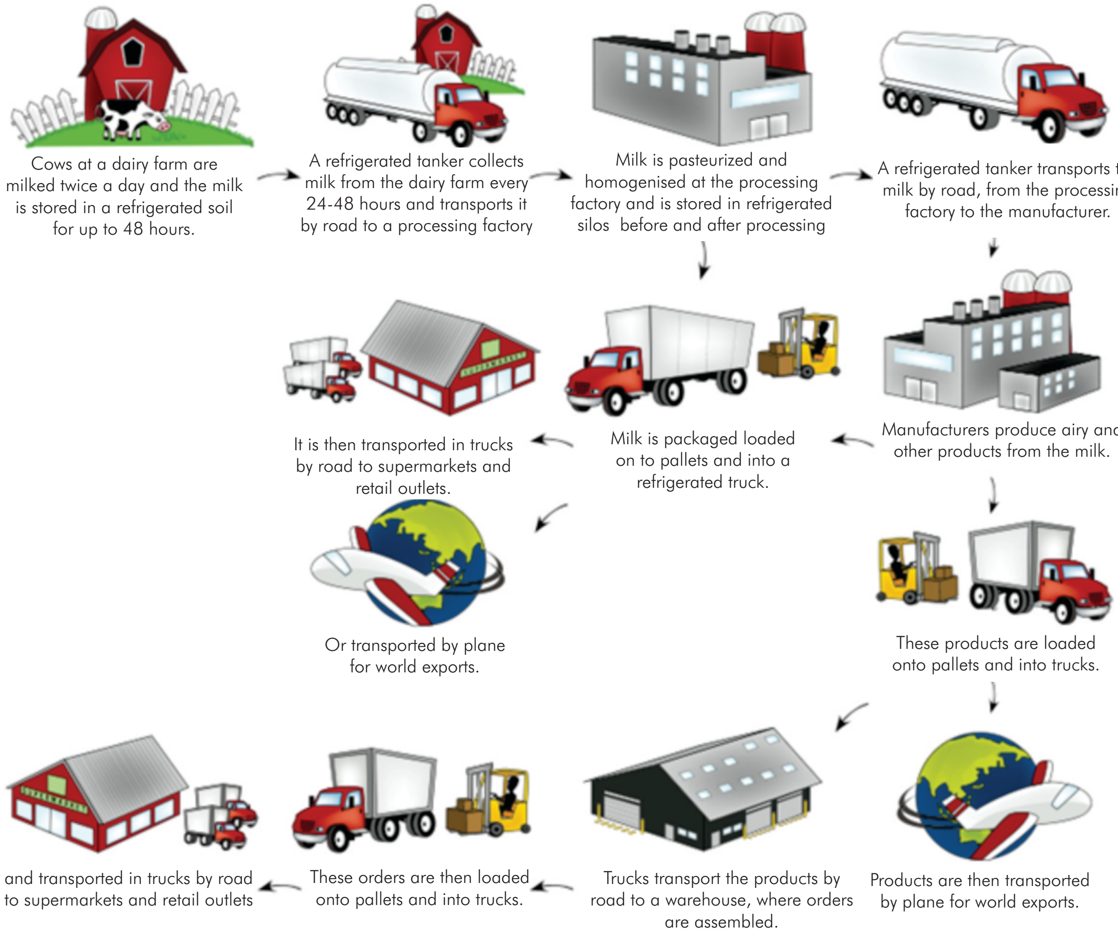
For storage, mother dairy has well equipped cold rooms at manufacturing facilities, storage hubs, CFAs, distributors as per FSSAI (Food Safety and Standards Authority of India) norms. "With the retailers, we have Visicoolers and deep freezers," Ghosh adds. As far as transportation is concerned, Mother Dairy uses various types of refrigerated vehicles in the mix of Small, Medium and Big Sizes from its outsourced vendors which cover both primary and secondary line of distribution.

Hygiene and standardization

Hygiene is a top priority of containers and it is not compromised at any level. Before loading of containers, proper cleaning is ensured and post loading once the container doors are closed, seals are placed on the Doors . The temperature is pre chilled at minus 18 degree for frozen business before we start loading. After loading, the vehicle again gets chilled upto minus 18 degree before it leaves for the Local / Upcountry Trip.

Tracing and monitoring practices

Talking about tracing and monitoring practices, Ghosh states, "Almost all of our vehicles have GPS and data loggers installed which gives us positioning and temperature detail during transit."



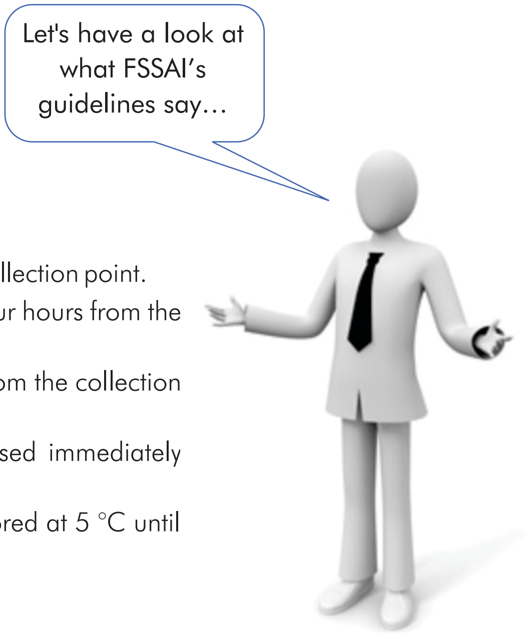
A typical Dairy Supply Chain

Continuous improvement is required

The scope for improvement is ever-present and is also required in the supply chain process of Mother Dairy. "When we move our product for a drop size of 5-6 distributors, we start the first point at minus 20 degrees, but for the last point the temperature sometimes falls upto minus 16 degrees. Both frozen and chilled products are temperature sensitive and as a preventive measure, our vehicles are equipped with data logger censors for monitoring deviations, if any.

Perspective about Indian cold chain industry

When asked about the current Indian cold chain market, Ghosh replies, "Cold chain distribution in India is at a nascent stage. This industry is likely to grow at an annual rate of seven per cent during the next five years. At present, it is largely fragmented and unorganized. The share of the organized sector in logistics and supply chain forms only 20-30 per cent of the sector."



FSSAI's Guidelines for Milk and Milk Processing unit

- Milk should be stored in bulk cooler (5 - 8 °C) at the collection point.
- Milk has to be taken to the processing plant within four hours from the collection point.
- Refrigerated vans should be used to transport milk from the collection point to the processing plant.
- In the processing plant, the milk has to be processed immediately otherwise it should be stored at 4°C.
- After pasteurization, the processed milk has to be stored at 5 °C until used for making milk products.

08 Cold Chain in India

-By Editorial

Food Wastage In India Due To Inadequate Cold Supply Chain

IT IS ESTIMATED THAT 30–50% (OR 1.2–2 BILLION TONNES) OF ALL FOOD PRODUCED ON THE PLANET IS LOST BEFORE REACHING A HUMAN STOMACH.

Known observation doing rounds in all forums - A recent report from the national auditor, tabled in parliament, found that India did not have space to store 33 million tonnes of foodgrain worth 12 billion dollars, which it had bought from farmers for various government food security schemes.

"13% of India's gross domestic product (GDP) is wasted every year due to wastage of food grains in the supply chain." (Source: India's Warehousing Development and Regulatory Authority.) This constituted a 40-% shortage in storage space, for a total stock of 82 million tonnes that was held by the Food Corporation Of India (FCI) in June last year.

The shortcomings of the cold chain system leads to post-production losses. "India is also the largest producer of milk, with 105 million tonne per year. It produces 6.5 million tonne meat and poultry and 6.1 million tonne fish. However, the extent of processing is low. The Indian cold chain industry is still in a nascent stage, with a large number of small and unorganised players. However, we are witnessing a clear shift towards usage of better technology, equipment and operating processes.

The Indian cold chain sector, which is currently grappling with issues concerning the quality of food products, food safety, maintenance of proper storage conditions, etc. so lets discuss some of the key aspects of cold supply chain through a Q&A format:

Q: What are some best practices in Cold Chain transportation?

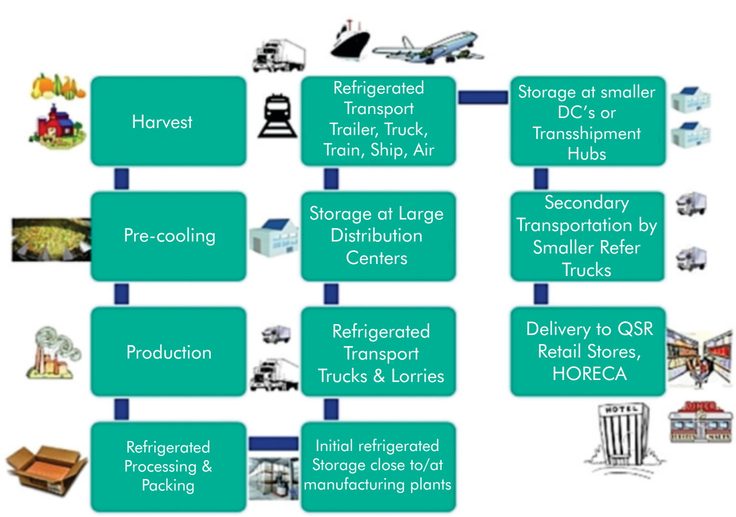
Cold Chain transportation has evolved significantly from dry-ice packaging to refrigerated trucks. As with any nascent industry, there are industry leaders and local/regional inexperienced operators. A Cold supply Chain Company has to distinguished itself in the creation, adoption, and implementation of "Best Practices" across its service offerings.

Q: What temperature needs to be maintained for different product types?

Temperature requirements vary by product type. Indicative ranges for different industries are summarized below.

Q: What happens in case of a vehicle break-down?

The first priority in case of a vehicle break-down is to ensure the safety of the cargo. Modern vehicles have different units for the truck and refrigeration and even if the truck breaks down, the refrigeration unit will continue to function independently. It is imperative to move the cargo quickly to a back-up truck (refer best practices in transportation) so that the cargo can reach its destination. There are also options available with back-up generator, to ensure that product does not suffer at any cost.



Q: Why is a network important?

Although India's highway infrastructure has improved significantly in the last decade, there are still occasions where a vehicle can meet with an accident or a break-down. A pan-India network enables the company to respond to any such eventuality promptly and deploy resources such as backup trucks, personnel etc. to resolve the problem.

Q: Why is cold chain important?

Different industries require their raw materials and finished goods to be transported under temperature controlled conditions. This is necessary to preserve the integrity and quality of the overall product. Consider the illustrative example of a frozen or chilled food item as it moves from the field to the fork. The implementation of an effective cold chain solution minimizes loss of texture and flavour to produce and delivers fresh products to the end user both in and out of season. Other industries that rely on cold chain solutions for their products include Pharmaceutical, Meat & Poultry, QSR, Retail, FMCG & Dairy, and Paints.

Q: How do you choose a service provider?

India has relatively under developed cold chain infrastructure and the service providers are primarily local or regional players. Companies offering these services need to have

Proven track record

Domain and technical expertise

Risk mitigation strategies

Trained staff

Modern & young fleet of reefer vehicles

Mr. Guide says: *As usual, questions/issues/challenges will continue to face the industry. However advent of QSR, MNC back-end integrators, government investments in cold storage, evolution-ever so cautiously of the logistics service providers in this space and a better remuneration model will be the way ahead.*

TCI Supply Chain Solutions

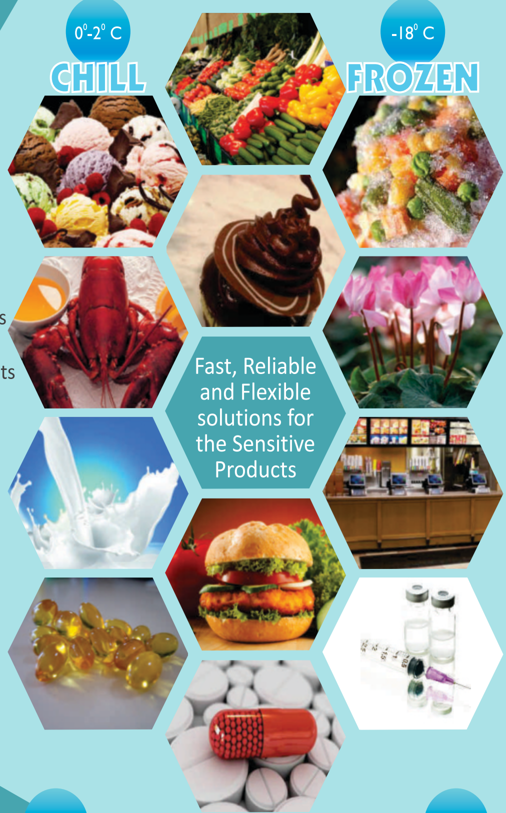
COLD CHAIN

(-25°C) .... (0°C) .... (+25°C)

Temperature Maintenance

0°-2° C
CHILL

-18° C
FROZEN



FOOD/QSR's
- Dairy Products
- Fruits & Vegetables
- Fast Food
- Meat & Fish Products
- Marine Products
- Frozen foods

SPECIALITY
- Aromatics
- Chemicals

2°-8° C
PHARMA

HEALTH CARE
- Vaccines
- Medicines
- Gelatine Capsules

-29° C
DEEP FROZEN

Cold Chain Services from TCI Supply Chain Solutions presents state of the art transport & logistics solutions to meet your specialized temperature controlled service needs.

Cold Chain brings to your disposal the vast network & credible infrastructure of the TCI Group so whether you need it hot or cold,we will bring it you.

TCI Supply Chain Solutions

TCI House, 69 Institutional Area, Sector 32, Gurgaon-122 207, Haryana. India

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A Division of Transport Corporation of India Ltd.

09 Case Studies

-Contributed by Mr. Edward Ray, General Manager-International Business Development
Daifuku Co. Ltd.

Daifuku is a Japanese Organization, in the business of providing automated logistics solutions to a wide variety of industries. One of the major users of its technology is food, and they have technology that is used in both ambient and frozen environments.

Case Study 1- JA is short for Japan Agriculture, and is an agricultural coop much like Amul in India.

Success Logistics File 9 **JA Mii** **Horticulture Distribution Center**

New distribution center improves vegetable freshness with temperature control and efficient warehouse opeations

Japan's Mii region contains fertile land along Chikugo River where conditions are well suited for farming. In July 2005, JA (Japan Agricultural Cooperatives) Mii (headquartered at Ogori, Fukuoka, Japan) opened a 'Horticulture Distribution Center' utilizing cold chain technology exclusively for vegetables, with the goal of distributing fresher products while using less labor.

Horticulture Distribution Center
Location : Kurume, Fukuoka
Building Area : 3,753 sq.m (40,397 sq.ft)

Operation handles a variety of vegetables

Over 80 types of vegetables are grown in the region. Vegetables such as leafy greens, spinach, and leeks are grown in greenhouses throughout the year while seasonal vegetables such as lettuces, cabbages, and radishes are harvested in the fields from winter through spring.

The old distribution center was not automated. Operations such as receiving and shipping were dependent on manual labor inside a refrigerated warehouse. The new center was determined to be constructed as a national Agricultural Relief Project in 2004. Various equipment was introduced into the center, and products were automatically handled in temperature controlled zones.

Products stay fresh within a temperature controlled AS/RS

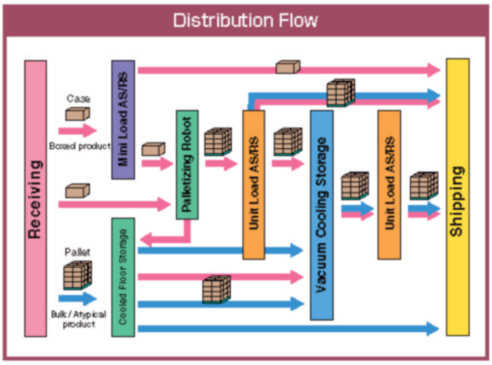
The JA Mii distribution center has customers in 46 markets from 63 different companies. Yearly sales total 4.4 billion yen. From April to November, operation hours are 7 a.m. - 5 p.m. From December to March, when many vegetables are at their peak production, the center operates from 7 a.m. - 8 p.m.

The facility handles boxed, bulk, and occasional atypical products. Boxed products are brought in by growers by the case and placed on conveyors. They are stored temporarily in a mini load AS/RS (Automated Storage & Retrieval System) at 5 ℃ (41 ℉) and stacked onto pallets by robot. If the quantity of received cases fills one pallet, cases are sent directly to the robot without passing through the AS/RS.

Palletized products are quickly transported by a high-speed Sorting Transfer Vehicle (STV) and stored in a unit load AS/RS at the same temperature as in the mini load AS/RS.

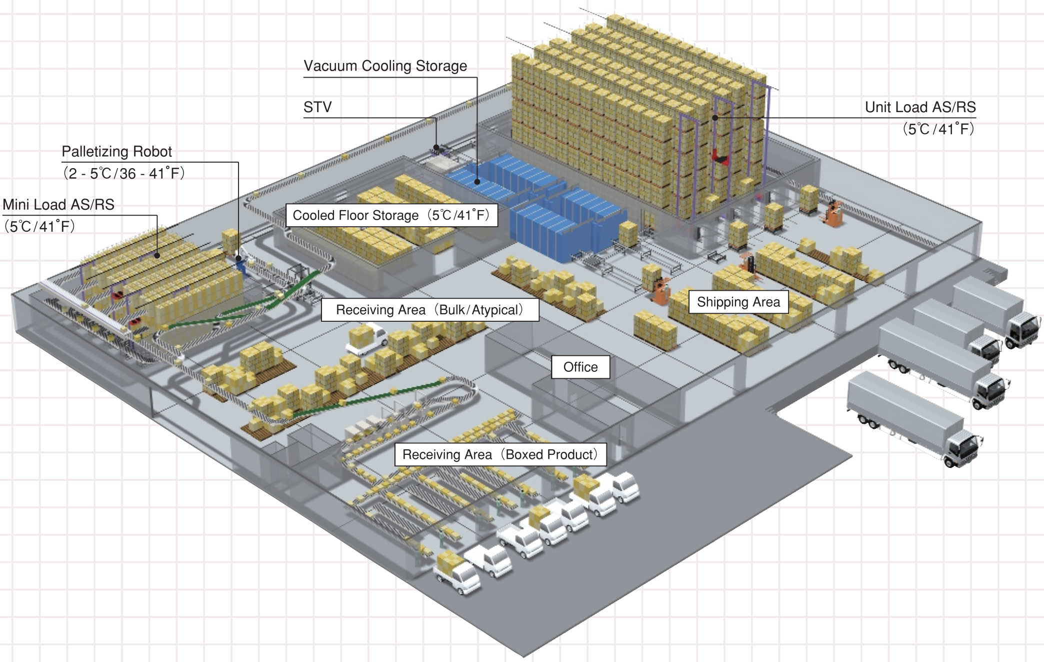
Bulk and atypical products are stacked on pallets in the shipping area and stored in cooled floor storage. Products stored in the unit load and in floor storage are transported to a cooling storage for vacuum pre-cooling and then put back into the AS/RS until shipping. Tomatoes and cucumbers, which may burst in vacuum precooling, are shipped without going through the cooling storage.

In the new facility, temperature control preserves product freshness and automation improved work efficiency. "The shelf-life of many of our products has increased, and in some cases doubled; so our partners are very happy. Boxed products are simply placed on conveyor. This operation is comfortably and easily performed by employees while the quantity is accurately confirmed automatically. These results have increased customer satisfaction," explains Distribution Center Manager, Mr. Mitsuaki Higuchi.




Shuttle STV. Transports pallets between palletizing robot, vacuum cooling storages, and unit load AS/RS.


Unit load AS/RS with 3 cranes stores 388 pallets (up). Transport to vacuum cooling storage (2 lines, total 18 pallets) is automated.




Mini load AS/RS (5 cranes, stores 1,080 cases). Upper conveyor delivers products to the AS/RS, and lower conveyor delivers products from AS/RS.


Palletizing robot handles max. 700 cases per hour. Direction of cases can be turn around, depending on characteristic of each product.


Receiving area with 7 in-line conveyors, put lids onto cases and ties them down automatically.

DAIFUKU NEWS No.192 (October 2009)

Case Study 2- Nippon Access is a food wholesaler in Japan.

Success Logistics File 6 **Nippon Access Hokkaido, Inc.** **Ishikari Frozen Distribution Center**

Frozen food DC implements efficiencies in its sup

Nippon Access Hokkaido, Inc. (NAH) headquartered in Sapporo, Japan is a subsidiary of major food wholesaler Nippon Access, Inc. The subsidiary mainly markets its products in Hokkaido. NAH, the major food wholesaler in the region, has distribution centers with refrigerated/ frozen facilities around Hokkaido, which creates a strong delivery network throughout the prefecture and allow the company to quickly supply fresh, high-grade products. In February 2007, NAH teamed up with a manufacturer and a warehousing company to open the cutting-edge Ishikari Frozen Distribution Center. The collaboration of the three companies within the DC creates a more efficient supply chain than any of the companies had on its own. Within the facility, the companies shareresources, including inventory, to reduce risk and to decrease transportation costs.

Ishikari Frozen Distribution Center
Building Area : 5,269 sq.m(56,715 sq.ft)
Total Floor Area : 6,667 sq.m(71,763 sq.ft)

Ishikari Frozen Distribution Center is one of the largest distribution centers dedicated to frozen food in Hokkaido. Its innovative material handling systems include unit load Automated Storage & Retrieval System (AS/RS) in a −30℃ (−22˚F) environment, Sorting Transfer Vehicles (STVs) for load handling, Jet Surfing Sorter for case sorting, and a piece sorting system. The temperature in the majority of the DC is kept below freezing. For example, processing areas on first and second floors are −5˚C (23˚F) and the shipping accumulation area is −15˚C (5˚F).

Inventory previously stored separately in five different facilities is now consolidated. Product storage, input/output, sorting, inspection, and shipping are processed at Ishikari. One-thousand frozen food items make up 80 % of the volume and 500 ice cream products make up the rest. Products are delivered to 1,500 retail and convenience stores; frozen food is destined for Hokkaido and ice cream for Sapporo. Sixteen-thousand cases are shipped daily.

Orders are consolidated for same day shipping

NAH runs the DC with the Toyo Suisan Company, which handles product input to the AS/RS, inventory control, and output to picking. NAH manages sorting, picking, and shipping. Order and shipping data are shared between the companies so that product replenishment for the AS/RS can be automatically moved from Toyo Suisan's adjacent warehouse when necessary.

Customer orders are received via an electronic ordering system. Orders received by 3:30 pm are processed and consolidated from the furthest stores first so that trucks arrive next day. Sorting for consolidation occurs daily in seven batches (frozen food: 2, ice cream: 3, convenience store: 1, other: 1) as follows:

- Case products are output on a pallet from the unit load AS/RS and transported to the picking area via STV.
- An operator picks the number of cases displayed on the terminal from the pallet, attaches shipping labels and inducts the cases onto the conveyor.
- Case shipped products are sent to the Jet Surfing Sorter and piece shipped products are sent to the sorting system on the second floor to be sorted by route and store.
- Cases are loaded onto roll box pallets and pieces are loaded on designated carts for consolidation in the accumulation area until they are shipped.

Volume triples, errors eliminated using one-third the labor

Before consolidating the facilities, most load handling was manually processed and demanded a lot of time and labor. With the automated system in place, 25 people (one-third the amount used in previous operations), process approximately three times the volume in the same amount of time.

In the new DC shipping errors are eliminated by conducting multiple inspections. Products output from AS/RS are checked four times: at picking station (once), during primary and secondary sorting in the piece sorting system (twice), during unloading at destination (once), eliminating human error.

Aiming for additional cost reduction

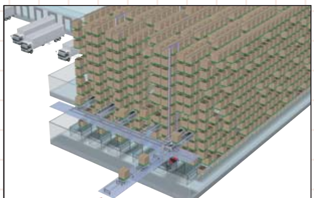
Mr. Hiroyuki Ota
Manager for Distribution Operations

Rethinking our distribution has only just begun. We have been successful in consolidating DCs but our three companies will continue to challenge our supply chain management system to create more efficiency and reduce cost even further.

ply chain management

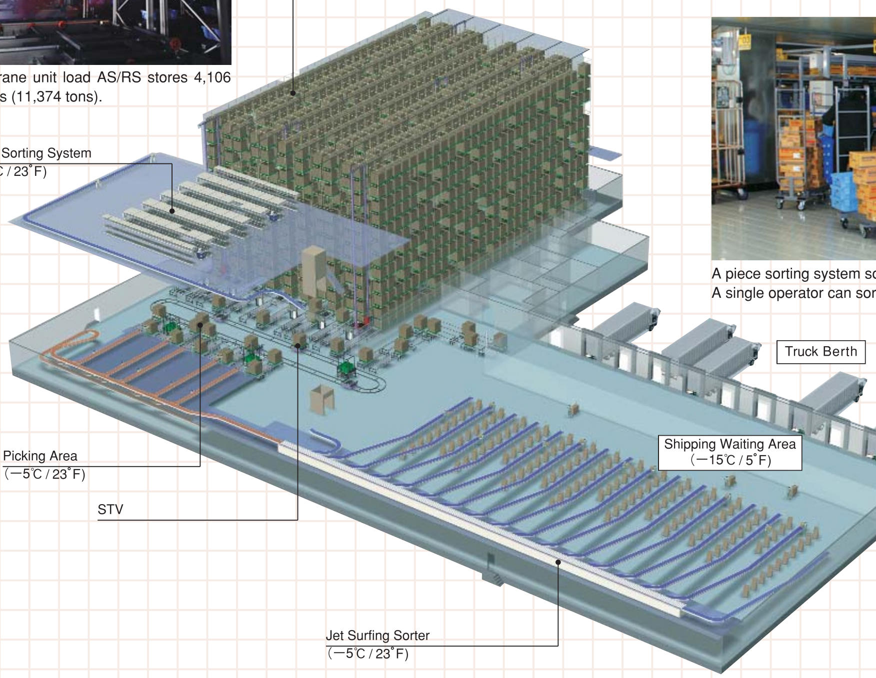
Sixteen-chute Jet Surfing Sorter sorts 4,000 cases/hour.

■ Backside of AS/RS

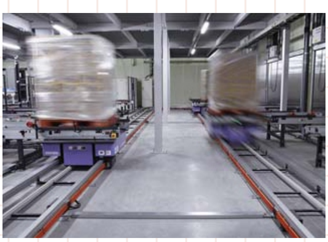


Automatic input from commercial warehouse

Six-crane unit load AS/RS stores 4,106 pallets (11,374 tons).

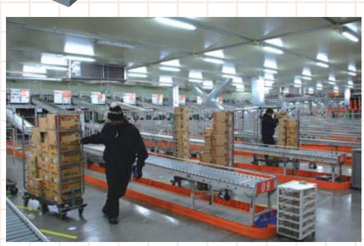


A piece sorting system sorts products by store.
A single operator can sort 400 〜 600 pieces/hour.



Five STVs transport product output from the unit load AS/RS to the picking area.

In the picking area, operators pick the quantity displayed on the terminal and induct onto the conveyor.



Case products sorted per route/store by the Jet Surfing Sorter and are transported on designated carts to the shipping accumulation area.

In Vogue

Social Media & QSR 10

-By Editior

Take a moment and think about what tickles your palate. Chinese, Lebanese, Italian, Mediterranean, South Indian or African?

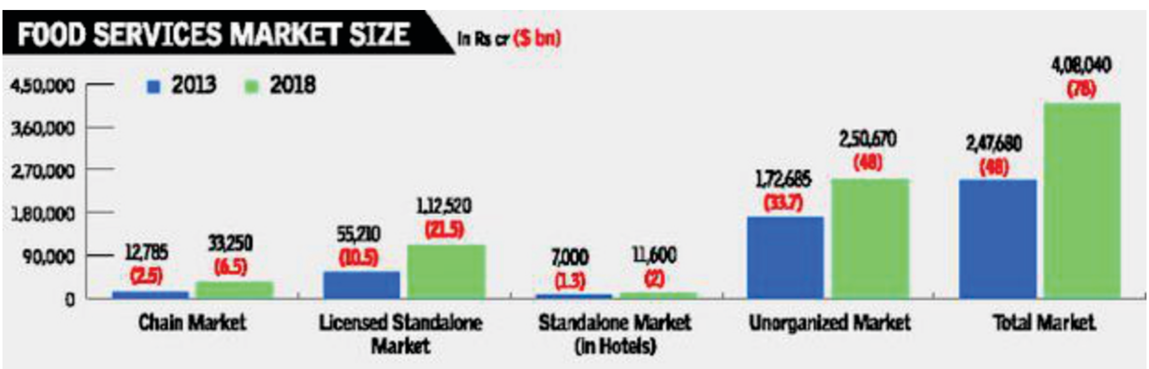
Research reports seem to indicate that Indian consumers seem to be patronising Italian cuisine the most, gulping down pizzas and pastas. Chinese comes next. This, reports say, is largely fuelled by young consumers aged 14-45 years.

It's not surprising that the higher frequency of eating out has also evolved the market for the food services sector. The Indian food service market has come a long way from the early Nineties when it was dominated by unorganised players and few brands.

Food services market in India is estimated at $48 billion in 2013. This is projected to grow at a CAGR of 11 per cent over the next five years to reach $78 billion by 2018.

The revolution began in 1996 with McDonald's, Pizza Hut, Domino's Pizza, Subway and Yo!China, among others, setting up shop in the country. Since then, the food services market has been continuously growing.

Let's look at the size of the Indian food industry. A report by National Restaurant Association of India (NRAI) and Technopak reveals that the size of the food services market in India is estimated at $48 billion in 2013. This is projected to grow at a CAGR of 11 per cent over the next five years to reach $78 billion by 2018.This market is largely unorganised. Chains account for as much as five per cent of the total market.



Source: NRAI/Technopak

"The good news is that the food services industry is set to grow for many years to come, given the rising disposable incomes, a greater population of younger people, the growth of consumers in smaller towns and the widening exposure to new cultures and cuisines besides an increased propensity of eating outside the home," says Atul Singh, President, CEO, Coca-Cola (Indian and South West) and President, NRAI.

Interestingly, the QSR (quick service restaurant) and casual dining formats together account for 74 per cent of the chain market while cafes make up 12 per cent. Cafes make for an impulsive option to hang out while fine dining places are reserved for families.

Destination Menus

Quick service restaurants are a mainstay of the Indian food service market, and are growing fast. Fine dining is gaining prominence too. Both multi-cuisine and single-cuisine establishments have shown tremendous growth.

Organised market players such as McDonald's, Sagar Ratna and Café Coffee Day are looking to increase their market share in the QSR category by capitalising on untapped locations such as highways and airports or by creating new destinations with customised menu offerings.

Around 80 per cent of the consumers order in food at least twice a month, reflecting the need for this convenience especially in larger cities where distance is a prime issue.

According to the NRAI report, the chain restaurant space is marked by the presence of almost 100 brands with more than 3,000 outlets spread across various cities.

Hindrances To Growth

The key issues that continue to pose a challenge include high real estate costs, rising food costs, shortage of quality manpower, fragmented supply chain and over-licensing.

The NRAI report reveals that despite the food services market accounting for only 19 per cent of the total organised market in India, it holds an estimated 30 million sq. ft. of real estate space. The rise in the space allocated to food services outlets in food courts and standalone spaces in malls reflect the growing confidence of real estate developers.

Indian QSR and Social Media

Quick Service Restaurants in India have been quick to adapt to social media. They've tried their hand at cracking the social recipe to success and the metrics say they're quite close to cracking the code. While many international chains have set shop across the country, the Indian bred chains have fought bravely to catch up with them. Facebook sets the scene as most brands discover their comfort zone in this network and only few brands have dared to test the waters of Twitter and other social networks.

Facebook growth of the QSR brands

Of all the brands analyzed, KFC stands out

Not only do they have a large fan base of 4.82 million fans on Facebook, but also the most subscribers on YouTube and a strong follower base on Twitter. Though this gives them quite an edge, this is only the tip of the iceberg. Even though Dominos is ahead in terms of fan numbers (with 4.88 million fans), KFC takes the lead in terms of growth. Growing at a rate of 16%, they added over 800,000 new fans in the last two months. Cocoberry has lost followers in the time period and had a negative growth of 0.1 percent.

KFC also found the content sweet spot and their regular updates engage very well with their fans.

Apart from engaging a fan, a truly "social" brand also replies to fan posts. Once again KFC stands out. They've received the highest number of posts from fans (over 2,000) and their answers averagely come within 418 minutes. However, they answered only 23% of fan posts. McDonald's and Cocoberry are the two brands that do not allow fans to post on their wall.

Twitter performance of QSR brands

On Twitter, Mad Over Donuts stands tall. Dominos is not far behind, KFC on the other hand, which was the king of Facebook, takes the back seat when it comes to Twitter.

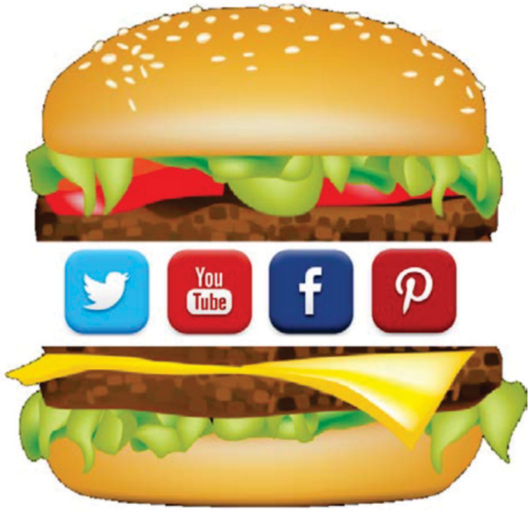
Dominos and Café Coffee Day have the most followers, 20,844 and 12,998 respectively. Starbucks, on the other hand, was the one to grow the most with a growth rate of 29%. Taco bell comes in second with a growth rate of 19.6%. Both seem to be growing well over the sector average of 11.2%.

On the other side of the road, Cocoberry, Pizza Hut and Barista do not reply to follower mentions and shut the two way street which is the epitome of the social network itself.

YouTube performance of QSR brands

The brands with official YouTube channels are KFC, Dominos, Pizza Hut, CCD and McDonalds.

Of these, KFC once again floats to the top with the most views, subscribers and a robust video base. KFC has 902 followers and also grew at a rate of 10%. This is lower than the growth rate (14.4%) of an average brand from the sector. Dominos experienced a growth of 58% which is the highest of all 5 brands.



Café Coffee Day has the most videos (total and new). They have 37 videos and also added 2 new videos in the time period analyzed. KFC comes in second with 34 total uploads and one new upload. The average length of videos from all these brands is under 2 minutes. Café Coffee Day has the longest videos with an average length of 1 minute 33 seconds while McDonalds has the shortest videos with an average length of 22 seconds.

Pinterest – a disaster for QSR brands

If YouTube was a bit of a disappointment in terms of brand portfolio, Pinterest is a disaster

CCD and Dominos have Pinerest accounts. CCD out performs Dominos. They have 512 followers and added 29 new followers while Dominos only has 35 followers and added 2 new ones. Café Coffee Days has 210 pins which is more than twice the number of pins as Dominos. The 210 pins of CCD have been re-pinned 279 times while Dominos' 85 pins have been repined only 20 times which leads CCD to have a better re-pin to pin ratio of 1.3 while Dominos only has 0.2.

Then again, being the only 2 big brands that are active on Pinterest gives them an automatic win.

**All statistics were gathered from July 1st, 2013 to August 31st, 2013.*

Mr. Guide says: *Quick Service Restaurants in India have undoubtedly gotten in to a serious relationship with social media as have their western counterparts. Let it be international chains like McDonalds and KFC or the local bred brands like Café Coffee Day or Cocoberry, they have mushroomed across the nation and are thriving on digital media. Social media can definitely be a game changer for these brands as their target group and the general social media demographic is predominantly that of the younger age band of 20- 35.*

Glossary

1. Bottlenecks: A bottleneck is a phenomenon where the performance or capacity of an entire system is limited by a single or limited number of components or resources.
2. Cold Chain: Refers to temperature-controlled supply chain.
3. Cuisine: characteristic style of cooking practices and traditions,often associated with a specific culture. Cuisines are often named after the geographic areas or regions from which they originate.
4. Distribution Centers (DCs) : The warehouse facility which holds inventory from manufacturing pending distribution to the appropriate stores.
5. Fast Food: Food that can be prepared and served very quickly
6. Fast-Moving Consumer Goods (FMCG) : Products that are sold quickly and at relatively low cost.
7. Franchise: A type of license that a party (franchisee) acquires to allow them to have access to a business's (the franchisor) proprietary knowledge, processes and trademarks in order to allow the party to sell a product or provide a service under the business's name. In exchange for gaining the franchise, the franchisee usually pays the franchisor initial start-up and annual licensing fees.
8. Frozen Food: Food that has been subjected to rapid freezing and is kept frozen until used.
9. FSSAI (Food Safety and Standards Authority of India): An agency of the Ministry of Health & Family Welfare, Government of India. The FSSAI is responsible for protecting and promoting public health through the regulation and supervision of food safety.
10. GCMMF: Gujarat Cooperative Milk Marketing Federation
11. Global Positioning System (GPS): A system which uses satellites to precisely locate an object on earth. Used by trucking companies to locate over-the-road equipment.
12. Hazard Analysis Critical Control Point (HACCP): Management system in which food safety is addressed through the analysis and control of biological, chemical, and physical hazards from raw material production, procurement and handling, to manufacturing, distribution and consumption of the finished product.
13. Hub: 1. A large retailer or manufacturer having many trading partners. 2. A common connection point for devices in a network.
14. Ingredients: a substance that forms part of a mixture.
15. Intricate : Having many complexly arranged elements; elaborate
16. INVENTORY: Raw materials, work in process, finished goods and supplies required for creation of a company's goods and services; The number of units and/or value of the stock of goods held by accompany.
17. Just In Time (JIT): An inventory control system that controls material flow into assembly and manufacturing plants by coordinating demand and supply to the point where desired materials arrive just in time for use.
18. Key Performance Indicators (KPIs) : KPIs help an organization define and measure progress toward organizational goals.
19. Outlets: A store that sells the goods of a particular manufacturer or wholesaler.
20. Outsourcing : Paying for a job done by someone who is not under your employment.
21. Perishable: Something, especially foodstuff, subject to decay or spoilage.
22. Pinterest: Pinboard-style photo-sharing website that allows users to create and manage theme-based image collections such as events, interests, and hobbies.
23. Quick Service Restaurant(QSR) : Refers to fast food restaurant

24.Return on Investment (ROI): It is the concept of an investment of some resource yielding a benefit to the investor

25.Segued : To move smoothly and unhesitatingly from one state, condition, situation, or element to another

26.Stock Keeping Unit (SKU): A category of unit with unique combination of form, fit, and function (i.e.unique components held in stock).

27.Supply Chain Management: Supply chain management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activites. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third party service providers, and customers.

28.Third Party Service Providers: A firm which provides multiple logistics services for use by customers. Preferably, these services are integrated, or "bundled" together by the provider. These firms facilitate the movement of parts and materials from suppliers to manufacturers, and finished products from manufacturers to distributors and retailers. Among the services which they provide are transportation, warehousing, cross-docking, inventory management, packaging, and freight forwarding.

29.Ubiquitous: Being or seeming to be everywhere at the same time.

30.Unwaveringly: with resolute determination.

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Tel: +91 124 236 1603-7 Fax: +91 124 235 1611

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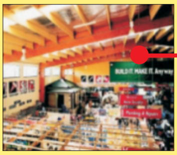

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Please write to us at: tciscs@tciscs.com

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