



Forces of Business and Forces of Nature – Building an Agile Supply Network

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Executive Sponsor

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Executive Summary

Procter & Gamble's recovery from Hurricane Katrina demonstrates how the company's Consumer-Driven Supply Network (CSDN) supply chain operating strategy allows P&G to respond to moments of truth for our business. This case study begins with a discussion of CSDN's rationale and key capabilities. It then examines how these capabilities facilitated P&G's business recovery (including full production within 45 days and market-share growth above pre-Katrina levels), employee recovery (including emergency housing for 500 employees) and community assistance in dealing with the devastation of the hurricane in the New Orleans area.

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Contents

	Page
1. P&G's CSDN Operating Strategy	
“The Consumer is Boss”	3
Key CDSN Capability Areas	
Reliable Service	4
Agile, Demand-Driven Supply	5
Affordable Differentiation	6
2. Katrina: The Path of the Storm, the Path to Recovery	
P&G Facilities in the New Orleans Area	8
Emergency Planning	9
First Things First: Our People	10
Emergency Housing: “Gentilly Village”	11
Community Assistance	12
Damage Assessment and Recovery	12
3. Lessons Learned	18

1. P&G's CSDN Operating Strategy

Consumers around the world recognize Procter & Gamble as a company of many "firsts," such as Tide, the first synthetic laundry detergent; Crest, the first fluoride toothpaste proven to prevent cavities; and Pampers, the first successful disposable diaper.

In the business community, P&G is also recognized for its "firsts" in marketing. We pioneered the color print ad and, later, radio and TV advertising. We also created the brand management system. And we were the first company to create the organization we call "Customer Business Development," a multifunctional partnership with our retail customers. We were also the first to integrate purchasing, manufacturing, engineering, customer service and logistics, and quality into a single, end-to-end supply chain organization, which we call, "Product Supply."

As P&G has grown, our supply-chain challenges have become more complex. Today, we find ourselves balancing many competing priorities:

- Rising supplier costs vs. the need to meet the consumer value equation.
- The benefits of scale vs. the demand for differentiation.
- The unique challenges of developed and developing markets.
- The unique needs of large, global retailers vs. those of small, local, high-frequency stores.

The Consumer is Boss

P&G is addressing these challenges by redesigning our supply chain around the consumer. One simple phrase, "The Consumer is Boss," underlies everything we do at P&G. Our industry is facing ever-increasing expectations from consumers, driven by the

fact that they have more choices than ever, and those choices offer a broader range of value than ever. More and more, consumers expect innovation, value, shelf presence, customization, and a satisfying in-store experience from our products.

The most important measure of how our supply chain works is whether our products are always there, always affordable and always preferred by the consumer at the "first moment of truth," when she stands at the shelf and decides what to buy.

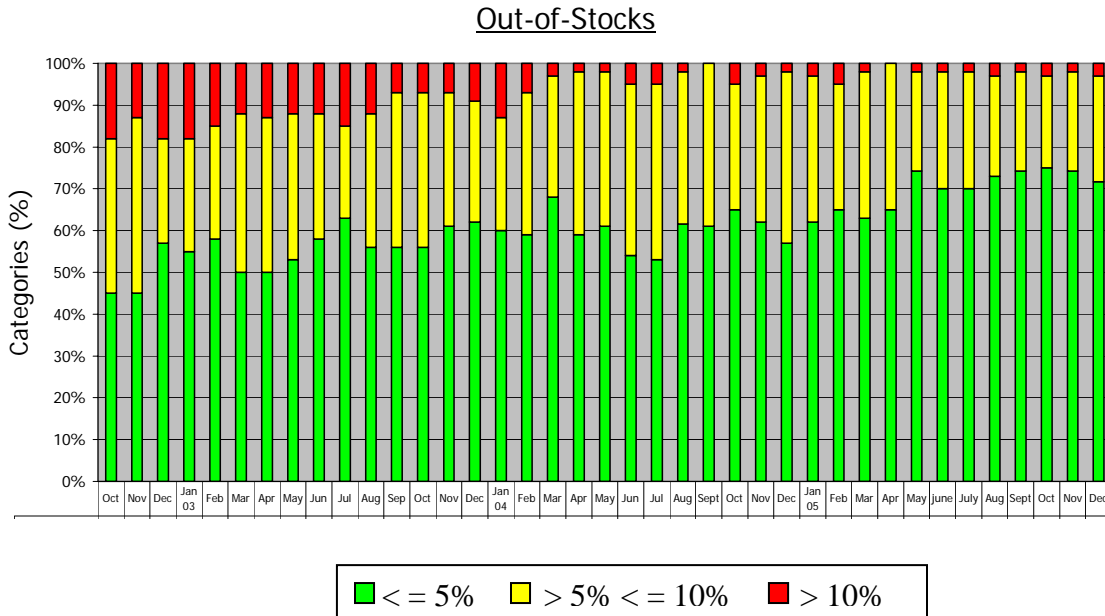
Over the last several years, our Product Supply organization has evolved from a single-minded focus on reducing total delivered cost, to producing to demand (or producing what sells), to today's focus: ***building a set of capabilities that create value for retailers (our "customers") and consumers alike – and drive growth for P&G's businesses.***

We are building our Product Supply capabilities in three areas: reliable service; agile, demand-driven supply; and affordable differentiation.

Reliable Service

We want to measure our performance through the eyes of the consumer as she experiences our products at the first moment of truth. This means getting the right product at the right place – on the shelf – at the right time. It also means understanding the quality of our products on the shelf (not just the quality when they left our manufacturing facility or distribution center), and ensuring our products are priced to represent a good value to the consumer. Reliable service is the first essential building block for CDSN.

Success in this key area can be measured with our "Shelf Out-of-Stock Scorecard" which has shown significant improvement since the implementation of the CDSN in 2003.



Agile, Demand-Driven Supply

To become more agile and demand-driven, our Product Supply organization focuses on:

- Reducing end-to-end supply network time.
- Building and operating a flexible and responsive supply network that is capable of producing to what’s actually selling, not what is forecast to sell.

We believe we can dramatically reduce supply network time, which has significant cash benefits for P&G and our retailers. Furthermore, it translates to speed-to-shelf for promotional events and new product initiatives.

Affordable Differentiation

The third new area of capability P&G is building into our supply network is affordable differentiation. We are able to customize certain products, packaging and supply processes to meet the unique needs of a particular retailer and its shoppers – our consumers. Pringles Prints is one example. We've created the ability to print a message on each chip, and we are offering it as a source of differentiation for our retailers.



P&G has the manufacturing capability to print a unique message on a chip, which can be customized for retailer events and promotions.

These new capabilities – reliable service; agile, demand-driven supply; affordable differentiation – are driving a fundamental change in how we collaborate with retailers. In the past, we've worked with retailers to create value by driving consumer demand – joint advertising, merchandising programs, etc. This helps build their business and ours, which we call "Joint Value Creation."

With CDSN, we can also lead Joint Value Creation through the supply network. When we use capabilities such as affordable differentiation to help a retailer's business grow, we believe the retailer will reinvest in P&G so we can grow our business together.

In other words, *we're using our supply network as a growth engine.*

The reinvention of our supply chain capabilities also requires a fundamental internal culture change. We've undergone a renewal of the Product Supply organization, from an internal focus to an external, end-to-end focus. Today, P&G Product Supply consists of 70,000 employees who each understand how their piece of the supply network affects the end consumer. Our people truly feel that they own the business, and we saw this in action when employees at all levels responded to Hurricane Katrina.

2. Katrina: The Path of the Storm – the Path to Recovery

P&G's experience with Hurricane Katrina is a story of overcoming significant obstacles in the aftermath of arguably the worst storm in New Orleans history. And it is a story that defines the character of P&G employees. It demonstrates:

- How we care for our people in the spirit of doing what's right.
- How we rise to a challenge.
- How our culture of developing business ownership, external focus and breadth of leadership enabled us to be the first major industry back in operation – in less than three weeks – following Katrina.

Facilities

More than 50% of P&G's U.S. coffee is produced in New Orleans. It is home to our Folgers Roast and Ground products, Folgers Instant Coffee and Millstone Specialty Coffee. We produce about 40% of all coffee sold in the US for home consumption; so, following Katrina, there was a compelling business need to restore our damaged supply chains.

P&G operates four major facilities the New Orleans area:

- The New Orleans Folgers plant (Gentilly plant), our largest site in the area.
- The New Orleans Millstone plant, a smaller facility adjacent to Gentilly.
- A large storage facility near the Mississippi River, where beans are delivered by barge and stored before processing at the Folgers and Millstone plants.

- The Lacombe distribution center, where finished, packaged coffee is held and shipped to retailers.

The Folgers and Millstone plants and the storage facility are in Orleans parish, which was very badly flooded. The distribution center in Lacombe was purposely located outside the flood zone and has natural environmental elements that protect the facility.

Emergency Planning

P&G has plans in place to reduce vulnerability for business interruptions of all types. Each of our sites has a business continuity plan, which is rehearsed and renewed annually. In New Orleans, our plan started with site selection and facility design. Each of our sites is located on high ground, six to nine feet above sea level, despite the fact that most of New Orleans is below sea level. Further, the structures are designed for 130- to 140-mph winds, which is just at the boundary between Category 3 and Category 4 hurricanes.

Our standard practice is to evoke emergency procedures whenever a hurricane enters the Gulf of Mexico. These procedures consist of special status meetings, moving inventory to distribution centers outside New Orleans, sending inventory back-up tapes to headquarters in Cincinnati, enacting a specific communication protocol, and implementing hurricane shutdown procedures.

Katrina first became a hurricane on Thursday, August 25, 2005. At that point, it was still "low force" and not tracking to hit New Orleans. By Saturday, however, Katrina

was on its way to becoming the worst hurricane to hit New Orleans in 100 years. We shut down operations at 10:00 PM and locked down all the New Orleans sites.

Katrina hit during the morning of Sunday, August 29, with Category 4 winds of 140-145 mph. The hurricane approached from the southeast, with the eye passing over the East End of New Orleans, closest to our plants. This was the worst-case scenario for us and the city. An approach from this direction causes the worst possible flooding along Lake Pontchartrain and the Mississippi.

First Things First: Our People

After the storm, our first priority was our people: to locate them and ensure their safety. This was difficult because of the complete failure of the phone systems in much of Eastern Louisiana. We assembled a command post at our Alexandria plant, about 225 miles north of New Orleans, and used local broadcast means and employee networks to advise people to call our hotlines to alert us to their status and needs.

We immediately made the decision to provide continuity of pay until employment could be restored and to provide assistance through fast cash loans. We also set up a relief fund, with the company matching employee donations.

We accounted for 100 percent of our employees by September 19. This may seem a long time, but we were challenged by the failure of communication systems and the fact that our employees were spread across many states. A few were actually stranded in their neighborhoods and were ultimately rescued by military and FEMA personnel.

Emergency Housing: “Gentilly Village”

Our link to FEMA turned out to be the solution for one of our biggest challenges – employee housing.

During recovery, we needed accommodations for both employees and construction workers. All accommodations anywhere near New Orleans were already overcrowded with evacuees.

We explored several options, including cruise ships and partnerships with hotels. A trailer village promised to provide the best capability to expand and contract accommodations as construction requirements and employee family needs changed. Through our relationship with FEMA, we became the first business to receive trailers. FEMA provided the first 113 trailers for employee housing on September 11.



Neighborhood near P&G's Gentilly plant



Trailer village for employees at the Gentilly plant

We christened the trailers "Gentilly Village," after the area where our main plant is located. The village consisted of 130 trailers and housed about 500 people during peak conditions. We provide hot meals, recreation and laundry facilities to make the Village more comfortable. We put in place a seven-day, on-a-week/off-a-week shift schedule to

help employees balance their work life with restoration of their homes and seeing their families. We also provided financial assistance for family visits because many of our employees were living apart from their families due to the lack of housing and schools.

Providing housing in this way not only provided support for our employees, it enabled our site to resume operations two months earlier. Hotel accommodations were not available until late November. We continued to use the village until July 2006.

Community Assistance

P&G played a significant role in providing support to the recovery of communities impacted by Katrina. As a result, local authorities recognized the company as an important part of the recovery effort, not only for donations, but for restoring jobs to the New Orleans area. P&G currently has 550 employees in New Orleans and supports at least another 500 jobs through suppliers and contractors directly tied to the site.

In total, more than 90% of our employees have returned to their jobs in New Orleans.

Damage Assessment and Recovery

Our recovery efforts started on the day of Hurricane Katrina. We assembled a core team in Cincinnati and broke the work into four key teams: employee recovery, business recovery (short-term outsourcing plans and integrating all recovery efforts), engineering/technology recovery for the site and coffee formulation recovery (ensuring coffee formula supply, quality and consistency once the plants were back in operation).

Early on it became evident that the storm had traumatized our on-the-ground leaders. Early support – financial, medical and psychological – was critical. Further, we made the deliberate choice to involve employees from non-affected sites to lead the recovery efforts.

To understand what would be involved in site recovery, we took hundreds of photographs of the areas surrounding our facilities – roads, railways, docks, etc. – in the first two days. At that point, all access routes to our sites and the majority of the surrounding area were still flooded. Primary damage to the facilities themselves was wind and water damage.



Access roads destroyed



Railways flooded

We sent a team of engineers to Baton Rouge to establish a command center as close to our sites as feasible. We staged generators and construction materials there to prepare for site recovery. Procuring materials was very difficult, and many materials had to be brought in from the Northern and Midwestern states. Communications systems were essential to recovery, so we installed satellite systems at each of our sites.

Our biggest challenge during the aftermath was the local infrastructure:

- We had no road access for 12 days.
- Phone communication was out for several weeks. At one of our locations it was not restored for six months.
- We had no power or natural gas to our sites for the first two weeks. One of our coffee plants did not have power or gas restored for five weeks.
- City water and sewer service were not available. This was a significant problem because our plants require 300 GPM of potable water, and local authorities could not advise when service would be restored.
- There were no services in the surrounding area, such as fire, medical, food or hotels.
- There was insufficient housing and no schools for employees' children.

While the Port of New Orleans resumed service within three weeks, we had seagoing containers of coffee deposited at ports all along the Gulf Coast; they had to be located, reconciled and returned.

One of the most inspiring things about this effort was the leadership demonstrated by hundreds of P&G people involved in the recovery. Regardless of job level or function, everyone was completely aligned behind two compelling priorities:

1. Support our people.
2. Save our business – get it back in operation before fall peak season. For perspective, shipments during the 4th quarter are 33% higher than the remainder

of the year. Missing even one month of shipments in this period, would reduce the year's profit by close to 20%.

The strength of our corporate culture and the cultural transformation we'd made with CDSN was a genuine asset. We were breaking new ground: never before had so many employees been devastated by a disaster of this kind. We were able to very quickly establish new policies and procedures because we had strong company principles, values and the CDSN operating strategy to guide us.

With respect to the business, New Orleans employees are extremely proud that Folgers is America's favorite coffee. They were not about to let shelves go bare during the 2005 holiday season, and the only way to save the holidays was to get our plants back in operation. This drove both morale and ingenuity.

Recovery of supply-chain operations included securing alternate sources of supply to make up for lost production in September and restoring production in the New Orleans facilities. We had no time to lose.

We quickly surveyed available capacity and made decisions. Because we've worked so hard on a new Product Supply culture that empowers people at all levels, we were able to spread work out and make key decisions with unprecedented speed.

We increased production to capacity at our sites outside New Orleans, but we still needed more production. Thus, we immediately established five teams to source portions of our business externally to provide supplemental production during the recovery period. Each team had the necessarily financial, quality and technical knowledge necessary to make on the spot decisions. We qualified new two suppliers in Mexico and three in the

United States. To enable speed, we had a technical team and quality assurance leadership reside at the supply site during the entire qualification period. In each case supply was established in under one month.

Further, we purchased used equipment and started up a new production line for Specialty Coffees at our Kansas City Coffee Plant. Again, the technical mastery and leadership we have established in our people enabled great agility. We purchased the line, refurbished it and started production on it in just one month. This line is still in operation and is used to supplement production during peak season and for launches of new products.

We worked simultaneously to restore production at our New Orleans plants. For the first 12 days after the hurricane, we had no road access. We transported engineers and craftsmen by helicopter to the site beginning September 2. We obtained road access on September 10; and within seven days of that time we started production on the first line.

This first week was not without its challenges. We hooked up generators, completed preliminary repairs and cleaned the facility.

As stated above, our plants consume 300 GPM of water. Initially, we used 20 tank trucks in a continuous supply loop to transport potable water to the plant, just to support the start-up of the first operation. To support full production at our sites, we decided to drill a new well, which was in operation by early October. This well continues to provide water today at a savings versus local supply costs. City potable water was not restored until late December, so we were very glad we made the investment to drill the well.

Each of our operations went through thorough rigorous quality assurance qualifications. Of course, we assured the same standards of excellence our consumers

have come to expect from Folgers and Millstone. Each of our operations was inspected by the FDA within two days of resuming operation.

By mid-October the plants were at full capacity.

Throughout this process, relationships were key. One of our biggest challenges was the local restrictions placed on access and the political climate following the storm. The area was under martial law, with dusk-to-dawn curfews. Military checkpoints were established, but there was a lack of clarity of authority. One key to our success was the relationships we'd already established over many years working collaboratively with local authorities. Ultimately, we had to gain approval from four local and regional authorities to access our sites, and we even used a local police escort to ensure that we would not be detained at checkpoints. Leveraging local contacts and relationships was also essential to restoring utilities and gaining FEMA support.

3. Lessons Learned

As a result of P&G's approach to the recovery, P&G's largest coffee business - Folgers Roast & Ground products – is now stronger than ever. We were able to support all scheduled post-Thanksgiving 2005 promotion events and launch new products starting in January 2006. As a result, consumer loyalty continues to grow and our volume share is now 6% above pre-Katrina levels.

Our experience with Hurricane Katrina has taught us three key lessons:

1. Corporate culture and organizational structure are essential. P&G is a company of leaders, and we saw that in action during the recovery from Katrina. We were able to quickly establish priorities and put daily checks in place.

Our CDSN structure allowed us to integrate and manage all recovery plans. Our mindset was that no barrier was too great. In addition to the commitment and resilience of local employees, we immediately felt the full support of the entire company, right up to the CEO, who checked in daily and visited the plant early on. As a result of this, *Folgers Roast and Ground share has actually rebounded above pre-Katrina levels.*

2. Another key to our success was our existing relationships with local authorities. Ultimately, we had to gain approval from four local and regional authorities to access our sites, and we even used a local police escort to ensure

that we would not be detained at checkpoints. Leveraging local contacts and relationships was also essential to restoring utilities and gaining FEMA support.

3. Once we were able to step back, we realized we had learned a lot about recovery, which we can and will use to ensure our supply chains are more resilient for a wide variety of business forces or forces of nature.

For example, we're improving the design of our facilities to protect against infrastructure loss and enable faster recovery of entire sites. In New Orleans, for example, we've made cost-effective improvements to harden our sites to hurricanes and reduce recovery cost and time in the future. We have increased supply network resilience by developing an improved strategy for our supply sites and suppliers during hurricane season. We've increased diversification of supply, from material storage through production to distribution, while continuing to improve our profitability. We're also looking at capacity-contingency planning, as well as labor-contingency planning.

Perhaps the overriding lesson we've learned is that *it all comes down to how our people respond*. We can be well prepared for an emergency and have a good contingency plan, but it's the decisions employees at all levels will make when they're under pressure

that count. P&G employees rose to the occasion because of our values, principles and operating strategy.

Our experience with Katrina is a reminder that we can plan all we want for the most effective and efficient supply chain, but our people and our capabilities will come to the forefront – or not – when we're put to a test like this once-in-a-hundred-years storm.

P&G's Consumer-Driven Supply Network model works because it ensures the right people and systems are in place to meet real-time business needs – as well as the needs of customers, consumers, employees and communities – and to capture new opportunities.