

1. Company, Plant/Factory Profile

Mondelez International, Inc., a global snack company was separated from Kraft Foods in October 2012. Kraft Foods began in 1903 with James Lewis (J.L.) in Chicago, Illinois. Now Mondelez International empowered people to snack right in over 150 countries around the world. We are one of the largest snacking companies in the world with global net revenue of \$31.5B in 2022. We hold #1 global position in biscuits and #2 in chocolate.

Monterrey HUB (MTY HUB) is part of US Business Unit which is second largest Business Unit and contributing 31% revenue for Mondelez. Monterrey HUB consist in two plants in the state of Nuevo Leon, one at Industrial Zone of Salinas city and another at Monterrey city situated 37 kms away from each other. Monterrey HUB contributing 9.5% of total Mondelez revenue.

Salinas plant was built on 2014 with an investment of \$1,000 MM USD in a total area of 515,000 m² with 180,000 m² of built area. Salinas plant having 14 high speed automated production lines with annual capacity of 413 Mtons makes it the biggest biscuit plant in the world.



Salinas



Monterrey

Monterrey plant was built on 1983 with an investment of \$250 MM USD in a total area of 65,000 m² with 30,424m² of built area having 8 flexible production lines with a capacity of 145 Mtons which makes it the second biggest biscuit plant of Mondelez International.

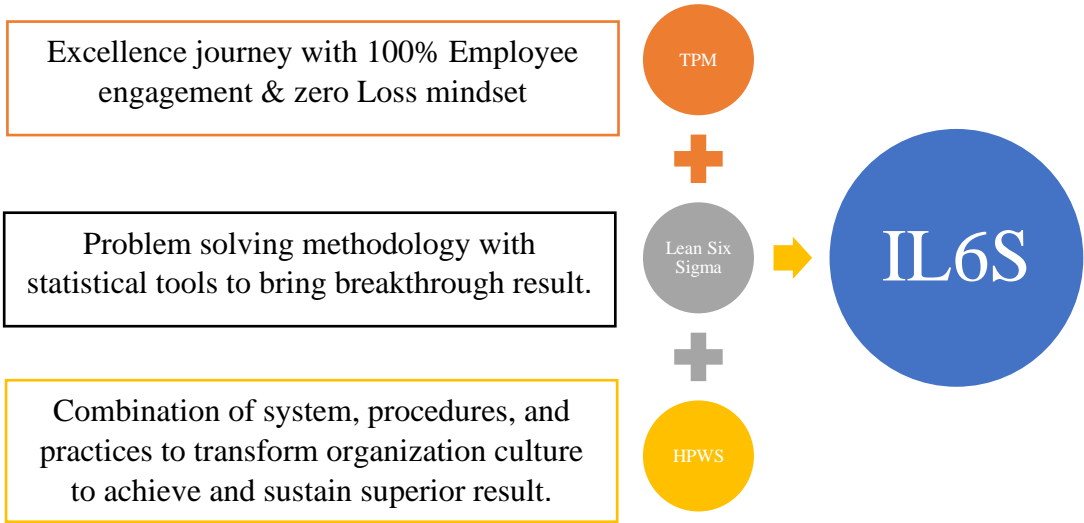
Salinas plant has 2813 colleges and Monterrey plant has 1586 colleagues, each plant has high level of gender diversity with 60:40 ratio of male and female colleagues across 22 lines. Salinas and Monterrey plant has separate Manufacturing Director and common leadership team consists of eight leaders who lead the area of: Operation, Quality, Safety health & Environment, Maintenance, TPM, Human resources, Engineering, and Logistics.

Monterrey HUB produces a variety of > 280 Biscuit variants consist of Oreo, Ritz, Belvita, Chips Ahoy and Newtons brand.



2. Milestone on the Journey of Manufacturing Excellence

To enhance supply chain performance in dynamic and highly competitive environment Mondelez launch organization capability building strategy IL6S (Integrated lean Six Sigma) which is a combination of well-known and proven methodology TPM, Lean, Six Sigma and HPWS (High-Performance Work System). IL6S official kick-off done in 2016 we started the training with the leadership team and core team members to institutionalized methodology across all levels of organization and part of the plant's daily routine.



Post kick-off we defined Line #5 Belvita in Salinas plant as model line where the methodology, tool and standard work process would be applied first. We have also defined all eight pillar leaders (Autonomous Maintenance, Focused Improvement, Planned Maintenance, Education and Training, Innovation & Initiative Management, Safety Health and Environment, Quality Maintenance and TPM office). We structured these pillars from cross functional team consists of subject matter expert, supervisors, and core team members by specialists, supervisors, and operational team. We also prepare detailed IL6S rollout plan with different autonomous and planned maintenance steps rollout plan across two pants.

In addition to methodology, tools and building capability we prepare our CBN (Compelling Business Need), to have vision, strategy and KMIs at one place. We communicated CBN with entire plant which helped us to create 100% employee engagement and excitement to achieve best in class result. To keep us razor focused we defined “Must Win Battle” and plant KPIs which are track and monitored through plant balance scorecard. The strategic actions to achieve these KPIs are structured and deployed through Hoshin Kanri. To establish pillar correlation and linkages plant KPIs further drill down to pillar KPIs and KAIs which are tracked and monitor on pillar board. Currently we have thirty-two autonomous maintenance teams driving TPM across all twenty-two production lines.

Focused Improvement pillar continuously engaged in leading loss intelligence, loss elimination and loss eradication process. Focused Improvement team prepared loss map and deployed it across all pillars, they build capability in different pillar to eliminate losses through effective usage of methodology and tools such as loss map, VSM (Value Stream Map), Kaizen event, DMAIC methodology, PM Analysis, etc. Plant engaged 100% employees in loss elimination journey through small group activity and Kaizen idea generation and implementation. Every pillar member working with zero loss mindset to eradicate losses to have Zero Quality Defect, Zero Safety Accidents and Zero Unplanned stop. All pillars used PDCA (Plan, Do, Check & Act) methodology to carry out monthly pillar meeting and assessment to verify their evolution and the result which is shared and discussed at weekly TPM governance meeting.

3. Benefits Achieved

Since implementing TPM in 2016, MTY HUB plant get many tangible and intangible benefits. For safety MAT TIR (Moving Annual Total Incidents Rate) improved from 0.25 in 2016 to 0.0 in 2023. Salinas plant running without any accident from 772 days and Monterrey plant from 1262 days. Consumer complaint per million (CCPM) reduced from 13.16 to 5.08 in 2023. GE (Global Efficiency), which is a Mondelez Global indicator of equipment efficiency improved from 73.8% in 2016 to 83.4 % in 2023, which help us to reduce conversion cost from \$569 per ton in 2018 to \$475 per ton in 2023. From sustainability perspective water consumption per ton reduced from 1.30 m³/Ton in 2018 to 0.77 m³/Ton in 2023 and energy consumption per ton reduced from 3.26 GJ/Ton in 2017 to 2.36 GJ/Ton in 2023. We engaged 100% employees in TPM journey through Kaizen idea and successfully implemented 1.43 Kaizen idea/person in 2023.

TPM help us to transform MTY HUB into high performance organization where we are respecting individual's capability, we are working on common objective and taking principle-based decision to bring out the best in everyone in the organization and always striving for zero losses and defects.

4. Key of our Manufacturing Excellence

The key to Manufacturing Excellence journey lies in continual improvement through employee engagement, benchmarking, quickly learn, replicate, and scale up. Our vision inspires us to achieve more and to be a benchmark lighthouse across Mondelēz global LLC. We believe to have a sweet balance between hunting and farming approach where we create reason to believe through quick win and build long term capability to sustain excellence journey and keep talent pipeline ready.

We want to acquire a complete understanding of losses and what caused them plus what we need to do to eliminate them. In future we want to use excellence journey outside factory walls to achieve and synchronize end to end supply chain from field to shelf. We are engaging our suppliers and business partners in excellence journey to achieve best in class operation.

In future we want to be the biggest and the best across Mondelez global LLC, we want to sustain and further improve result, capability, and culture. We want to eliminate all human touch and envisioning to have digitalization in place where we are getting right information at right time at right place to make first time right product with zero loss across value chain. We want to predict and prevent all losses to achieve stable and reliable supply chain.

Achievement Record

Company & plant name	Mondelez Mexico – Mondelez Monterrey HUB
TPM Slogan/Objectives	Integrated Lean Six Sigma – Identify, eradicate, and inspire. Objective: Achieve a stable and reliable Supply Chain.

Category	Index <i>Calculation Formula</i>	Unit	Plant	Benchmark Baseline YR	Actual Q3 YTD	Target 2023 AC	Target 2024 AC
S	MAT TIR = $\frac{\text{Total number of fatalities} + \text{Total number of lost time cases} + \text{Total number of restricted work cases} + \text{Total number of medical treatment cases}}{\text{Total number of hours worked.}} \times 200,000$	Rate	HUB	0.25 (2016)	0.00	0.02	0.01
			Salinas	0.30 (2016)	0.00	0.02	0.01
			Monterrey	0.03 (2016)	0.00	0.00	0.00
S	Days without an accident = <i>Number of days without any accident OR loss time incidence</i>	Days	HUB	50 (2017)	772	797	1162
			Salinas	50 (2017)	772	797	1162
			Monterrey	365 (2017)	1262	1287	1652
P	Output / FTE = (Tons Produce per Full Time Equivalent) $\frac{\text{Rolling Sum of 12 months output produced in ton}}{\text{Rolling sum of 12 months of Total FTE}}$	Rate	HUB	197 (2017)	122.4	112.0	148.5
			Salinas	113 (2017)	143.2	128.8	202.4
			Monterrey	288 (2017)	84.0	80.1	78.1
P	OEE = (Overall Equipment Effectiveness) $\frac{\text{Total Operating Time}}{\text{Total Production Hours}}$	%	HUB	81.0% (2016)	92.0%	94.4%	94.4%
			Salinas	81.5% (2016)	91.2%	94.5%	94.6%
			Monterrey	80.5% (2016)	92.4%	94.2%	93.9%
P	GE = (Global Efficiency) $\frac{\text{Total Operating Time}}{\text{Total Available Hours}}$	%	HUB	73.8% (2016)	83.4%	83.5%	83.9%
			Salinas	76.6% (2016)	82.8%	83.5%	84.2%
			Monterrey	70.8% (2016)	84.4%	83.2%	83.2%
P	Number of Breakdowns = <i>Number of Breakdown in packing lines / Year</i>	Number	HUB	1792 (2016)	735	529	383
			Salinas	949 (2016)	474	278	173
			Monterrey	843 (2016)	261	251	210
Q	CCPM = (Consumer Complaints per Million) $\frac{\text{Total number of consumer complaint received in a period}}{\text{Total number of million unit produced in a period}}$	Rate	HUB	13.16 (2016)	5.08	4.55	4.41
			Salinas	13.32 (2016)	4.95	4.00	4.22
			Monterrey	12.89 (2016)	5.45	6.10	4.96
C	Conversion Cost /Ton = $\frac{\text{Total plant conversion costs in period}}{\text{Total ton produced in period}}$	\$ USD / Ton	HUB	\$569 (2016)	\$475	\$538	\$498
			Salinas	\$528 (2016)	\$435	\$510	\$465
			Monterrey	\$697 (2016)	\$613	\$623	\$610
C	Total Yield Loss = $\frac{\text{Total monetary value of Raw and Pack Material Losses} * 100\%}{\text{Total monetry value of Raw and Pack Material used from zero base}}$	%	HUB	8.8% (2016)	3.2%	3.2%	2.9%
			Salinas	9.8% (2016)	3.5%	3.2%	3.0%
			Monterrey	6.9% (2016)	2.6%	2.6%	2.5%
D	DBNR = (Days Between Next Run) <i>Number of days from the end of the last run until the start of the next run</i>	Days	HUB	18.78 (2017)	10.2	10.8	10.5
			Salinas	15.4 (2017)	8.5	10.6	10.5
			Monterrey	23.85 (2017)	17.3	14.3	14.0

Category	Index <i>Calculation Formula</i>	Unit	Plant	Benchmark Baseline YR	Actual Q3 YTD	Target 2023	Target 2024
D	CTS = (Compliance to Schedule) <i>Variance of actual production versus scheduled by item / week.</i>	%	HUB	77.3% (2016)	94.4%	91.5%	92%
			Salinas	74.1% (2016)	94.1%	91%	92%
			Monterrey	82.9% (2016)	93.5%	92%	92%
E	Water consumption per Ton = $\frac{\text{Total water consumption in a period}}{\text{Total volume produced in a period in Ton}}$	m ³ / Ton	HUB	1.30 (2018)	0.77	0.60	0.50
			Salinas	1.54 (2018)	0.86	1.0	0.8
			Monterrey	1.07 (2018)	0.69	0.50	0.45
E	Energy consumption per Ton = $\frac{\text{Total energy consumption in a period}}{\text{Total volume produced in a period in Ton}}$	Giga Joule / Ton	HUB	3.26 (2017)	2.36	2.4	2.3
			Salinas	3.26 (2017)	2.29	2.3	2.2
			Monterrey	3.27 (2017)	2.43	2.4	2.3
M	Number of Kaizen ideas implemented per person = $\frac{\text{Total idea implemented in a month}}{\text{Total headcount in a month}}$	Number	HUB	0.3 (2016)	1.43	1	2.5
			Salinas	0.1 (2016)	1.28	1	2.5
			Monterrey	0.2 (2016)	1.09	1	2.5
M	Absenteeism = $\frac{\text{Total working hours lost due to absenteeismin a period}}{\text{Total working hours in a period + Total losshours in a period}}$	%	HUB	5.75% (2017)	1.6%	2%	2%
			Salinas	6.91% (2017)	1.7%	2%	2%
			Monterrey	4.6% (2017)	1.6%	2%	2%
M	Turnover Rate = $\frac{\text{Total voluntary termination in a period}}{\text{Total headcount in a period}}$	%	HUB	195.6% (2017)	35.6%	40.5%	24%
			Salinas	210.0% (2017)	38.3%	43.9%	24%
			Monterrey	181.0% (2017)	32.9%	37.0%	24%

5. Contact Person

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