

# Packaging Improvement Time at Mini Bimbo Production Line

## Holsum de Puerto Rico, Inc.

IE 5905 Capstone Design Course Extension SP – 2014  
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### Define

#### Holsum de Puerto Rico

In 1998 Holsum Bakers of Puerto Rico was acquired by the company's top management, making it 100% Puerto Rican owned. In 1999 the new owners registered the company under its present name Holsum de Puerto Rico, Inc. This way, the local industry leader also became an example of Puerto Rican entrepreneurship. Today, Holsum de Puerto Rico, Inc. prides itself in setting the standards with its innovative vision, excellence and quality, while being a pillar of the Puerto Rican economy in the twenty-first century.

#### Problem:

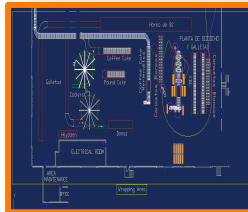
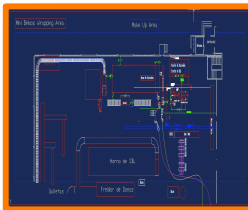
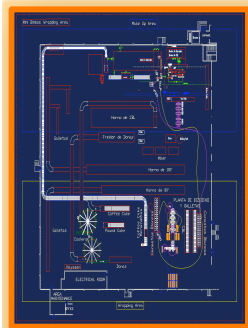
The department of engineering and the administration want to reduce the time of delay that occurs at the Mini Bimbo Wrapping Line. Also the department of engineering and the administration want to avoid the time at which the mini bimbos are exposed before packing. This is a situation of concern to the administration and staff at the Mini Bimbo Wrapping Line.

#### Goals

On the Mini Bimbo Production Line at Holsum de Puerto Rico, Inc., there isn't established minimum production goal. Every goal in production is established by the administration every day with a variance on the amount. During the past two month (May-June 2013), the Mini Bimbo Production Line had a loss of 105.72 hours or 4.4 days of additional production.

### Measure

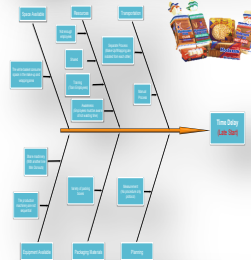
Spaghetti Diagram for Make-Up and Wrapping Area (Mini Bimbo Production Line) Current



### Analyze

Cause & Effects:  
Mini Bimbo Production Lines Fishbone Diagram  
Diagram Description

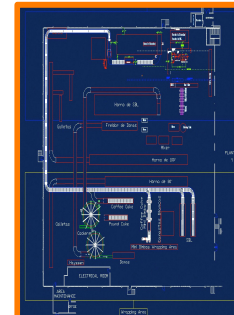
Problem Description	Mini Bimbo Production Line
Planning	The wrapping area has a protocol for both to proceed without either wrapping line being stopped. Because of other production lines that make-up and pack the wrapping area this means that the product area has to be empty.
Equipment Available	The wrapping area has to be empty for the wrapping machine (Conveyer). This means that the wrapping area has to be empty until the next delivery to the line.
Resources	Employees must be trained properly / employees are shared with other lines when an employee is not enough employees in the area.
Space Available	The empty white basket consumes space in the make-up area leading to be blocked with mini bimbo and in the wrapping area where they are stored.
Packaging Material	The different types of boxes used to pack the product increase the time of the process.
Transportation	The different area and wrapping area are located. This means the amount of area, employees and space that the process consumes is added to the time of production. Also is the risk of accidents when the white basket mini bimbo are close through the bridge.



Problem Description	Root Cause	Effect
1. Inefficient Production	Holsum	Holsum
2. Inefficient Production	Holsum	Holsum
3. Inefficient Production	Holsum	Holsum
4. Inefficient Production	Holsum	Holsum
5. Inefficient Production	Holsum	Holsum
6. Inefficient Production	Holsum	Holsum
7. Inefficient Production	Holsum	Holsum
8. Inefficient Production	Holsum	Holsum
9. Inefficient Production	Holsum	Holsum
10. Inefficient Production	Holsum	Holsum
11. Inefficient Production	Holsum	Holsum
12. Inefficient Production	Holsum	Holsum
13. Inefficient Production	Holsum	Holsum
14. Inefficient Production	Holsum	Holsum
15. Inefficient Production	Holsum	Holsum
16. Inefficient Production	Holsum	Holsum
17. Inefficient Production	Holsum	Holsum

### Improve

Mini Bimbo Production Line Recommended Transportation System (Mini Bimbos):

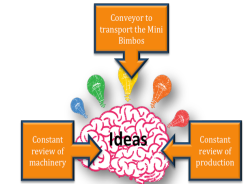


Mini Bimbo Production Line Layouts (Rectangle shows recommended system of transportation)



### Control

Ideas for Improve



Savings

Wrapping Area	Make-Up Area	
	Total	Total
Days/Production	23	12
Operator Hour	184	21
Total Time Delay	48.32	33
Extra Hour/Day	0.79	
Average	2.1	
Standard Deviation	0.985	
Cost of Production	\$ 42,320.00	\$ 625,028.64
Cost of Production	\$ 507,800.00	\$ 322,680.64

#### Thanks...

I want to thank the mentors for providing their knowledge, time and expertise to make this project a quality one. I also want to thank the Engineering Department of Holsum whose help was essential in this project. I also want to thank the directors of the department of production for letting me be part of your family.

#### Appendix:

Rowe Building, Pan Fuster  
Rowe Building, Pan Fuster  
Current & Classification (2010) 1-2000-Book  
Copyright © 2010, 2009, 2008, 2007, 2006, 2005, 2004, 2003, 2002, 2001, 2000, 1999, 1998, 1997, 1996, 1995, 1994, 1993, 1992, 1991, 1990, 1989, 1988, 1987, 1986, 1985, 1984, 1983, 1982, 1981, 1980, 1979, 1978, 1977, 1976, 1975, 1974, 1973, 1972, 1971, 1970, 1969, 1968, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1959, 1958, 1957, 1956, 1955, 1954, 1953, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1943, 1942, 1941, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1922, 1921, 1920, 1919, 1918, 1917, 1916, 1915, 1914, 1913, 1912, 1911, 1910, 1909, 1908, 1907, 1906, 1905, 1904, 1903, 1902, 1901, 1900, 1899, 1898, 1897, 1896, 1895, 1894, 1893, 1892, 1891, 1890, 1889, 1888, 1887, 1886, 1885, 1884, 1883, 1882, 1881, 1880, 1879, 1878, 1877, 1876, 1875, 1874, 1873, 1872, 1871, 1870, 1869, 1868, 1867, 1866, 1865, 1864, 1863, 1862, 1861, 1860, 1859, 1858, 1857, 1856, 1855, 1854, 1853, 1852, 1851, 1850, 1849, 1848, 1847, 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