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The System Italia Approach to Manufacturing

From the classroom to the shop floor

In occasion of the AME Atlanta International Conference 2024



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Overview

Italian pocket multinationals are family-owned companies that are 100% Italian. They are often characterized by the following:

Family management

A large percentage of Italian companies are family-managed, with 66% having all management positions held by family members.

Challenges with succession

Italian companies face challenges when passing the business on to the next generation, including a lack of preparation, conflicts, and resistance to change.

Lower reliance on external managers

Italian companies rely less on external managers than other European family businesses





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Overview

So, you think you've seen it all when implementing "lean manufacturing"?

The Italian Trade Agency will walk you through the unique approach conducted by Italian companies in Italy.

The first set of learning objectives is centered on professional skills:

- Use a common approach to improvement - standard work that is efficient and effective;
- Learn by doing, using cycles of learning – discovering best practices and lessons learned;
- Understand the critical aspects of improvement and change management.





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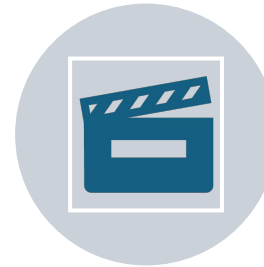


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Overview



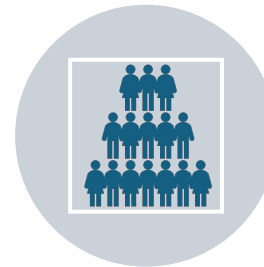
The second set of objectives is focused on developing the soft or people skills:



Be action oriented to “do” and “have others do”, not just design and plan



Build teamwork understanding and team leadership ability



Create “Teams” and understanding each members’ motivation





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Overview

The two main pillars of “Italian lean” which will be emphasized during the session will be on:

- continuous improvement and
- respect for people.





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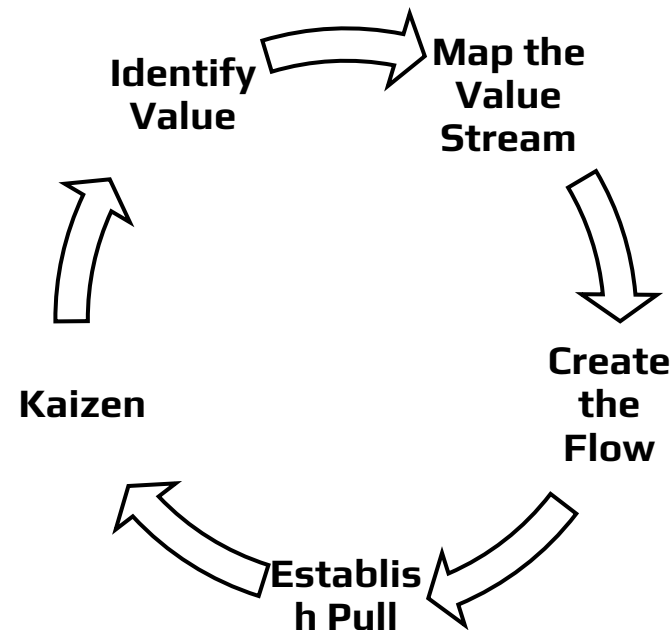


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The 5 Principles of Lean Manufacturing

1. Identify value from the customer's perspective.
2. Map the steps in the value stream for each product family, eliminating whenever possible those steps that do not create value.
3. Make the value-creating steps occur in tight sequence so the product will flow smoothly towards the customer.
4. As flow is introduced, let customers pull value from the next upstream activity.
5. As value is specified, value streams are identified, wasted steps are removed, and flow and pull are introduced, begin the process again and continue it until a state of perfection is reached in which perfect value is created with no waste, or Kaizen.





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A Complementary View to 5 Principles of Lean: Process, Purpose, People

It is important that managers align the **purpose**, **process**, and **people** when developing a Lean organization.

Managers act as coaches and help others get comfortable with identifying problems and practice continuous improvement daily. Lean leaders also create an environment that is engaging and conducive to learning. They are hands-on and work with their team on the factory floor to truly understand problems.

It has been shown that organizations that consistently practice **Lean** are more innovative and competitive, which in turn allows them to be more profitable and sustainable.





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The Lean Transformation Model – Italian stories –

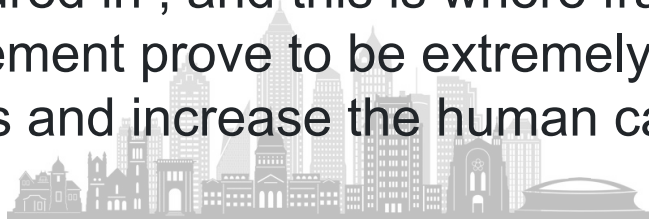


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According to Takahiro Fujimoto, Professor at the Faculty of Economics and Director of the Manufacturing Management Research Center at the University of Tokyo, in *Lean Transformations for SMEs*, Professor Arnaldo Camuffo vividly depicts how lean is transforming the heart of the Italian and of the global economy. Fujimoto also mentions that over 95% of OECD firms are SMEs, contributing to over 60% of employment. **Many of them –in Italy and elsewhere- are Genba-people-oriented and community-embedded.** With evidence coming from a wealth of cases and data, Camuffo provides a roadmap to successful lean transformations, particularly when economic conditions are unstable.

The Lean Model of the Toyota Plant in Japan was created **because of constraints due to economic and specific-market conditions.** Both Japanese and Italian small and medium enterprises have learnt to work within and around the constraints that are specific to their economies (some elements featured in , and this is where frameworks like Lean Manufacturing and Lean Management prove to be extremely useful, making companies successful even during hardships and increase the human capital of firms.





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The Lean Transformation Model

Italian stories - The Pietro Fiorentini Group

A story of Succession Management

At the end of the 1990s Mario Nardi, a young entrepreneur, and his brothers took over the family business, Pietro Fiorentini, a medium-sized mechanical and engineering company in the province of Vicenza.

The company was founded by Mario's grandfather in 1938 and became successful thanks to a patent for a control valve for LPG cars. It had enjoyed the legendary boom that characterized the Northeast of Italy during the second half of the 20th century, but by the late 90s this era came to an end, and the company had profitability and growth problems.

At this point, Mario and his brothers took over the business and applied lean thinking as a guiding principle to rebuild growth and success.





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The Lean Transformation Model

Italian stories - The Pietro Fiorentini Group

What was the problem they were trying to solve?

The problem was initially **defined as one of operational efficiency and productivity**, but Mr. Nardi soon realized that this was linked with market positioning and growth opportunities. What is unique to Pietro Fiorentini is the company's **absolute clarity** over the effects of lean thinking not only on its production department but also on its market positioning and on its economic and financial wellbeing.

The response

Mario and his team asked themselves a couple tough questions: **Is our business on the right track?** Is our business model appropriate? On the other hand, they systematically evaluated the effects of decisions on financial dynamics at corporate level, to improve the company's net financial positioning and free up the resources needed for investment and growth.





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The Lean Transformation Model

- Italian stories - The Pietro Fiorentini Group

How did they improve their process?

Pietro Fiorentini's transformation started right on the shop floor, where Mario decided to improve a small set of operational processes in the main plant, near the city of Vicenza.

The type of Lean Transformation he started was top-down, as Mario himself decided to apply this approach to the production part of the business, later realizing that he could apply Lean to all the other firm's processes, for increased efficiency. Following this method, he **started applying the scientific method**, that is running a test period for new strategies the firm was going to implement in corporate planning.





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- Italian stories - The Pietro Fiorentini Group

How are they building capability? REINVEST IN ITS PEOPLE!

Pietro Fiorentini extensively and consistently invested significant amounts of money in lean knowledge. This resulted, in many resources being put towards training production staff and young people and external training courses, alternated with internal training activities and experimentations on the field - in factories, technical departments, and more generally in offices.

This mix of activities has allowed for the **systematic dissemination** of lean knowledge at all levels of the company. Ten years' worth of this type of training investments resulted in the establishment of a team of highly skilled and motivated managers, engineers and workers.





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The Lean Transformation Model

Italian stories - The Pietro Fiorentini Group

What leadership behavior and management support this way of working?

The success of Mr. Nardi's approach happened **because he himself was fully involved in the lean journey, becoming its initiator and driver.**

As we mentioned earlier, Pietro Fiorentini's Lean Journey began with a top-down approach.

Mr. Nardi led the transformation firsthand, by taking part in every activity of the process, from the redesigning of the layout, to the creation of manufacturing cells and the launch of kaizen weeks.





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The Lean Transformation Model

Italian stories - The Pietro Fiorentini Group

What is the basic thought process that underlies the existing culture at Pietro Fiorentini?

Five traits permeate Pietro Fiorentini's organizational culture:

1. The primacy of action, the number and frequency of experiments, and the reliance on empirical evidence to make decisions about alternative courses of action;
2. The role of management in creating commitment to a common purpose that overcomes internal boundaries, establishing cross-functional processes and structures and promoting collaboration among departments;
3. The constant sustainment of lean operational practices guaranteeing that they become organizational routines and that the improved processes become new standards;
4. Performance measurements based on process measures (and not only on outcome measures);
5. The belief that people can learn and improve and that it is necessary to create an open and collaborative context promoting a continuous improvement culture.





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The Lean Transformation Model – Italian stories – FPZ

Context

Lean has proven to be successful for many different actors. For example, FPZ, a Milanese family-owned manufacturing company, much like Pietro Fiorentini, used this framework to eliminate waste in the production line and ended up freeing up the resources it needed to re-acquire full ownership of its business and invest in the company's future.





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The Lean Transformation Model

– Italian stories – FPZ

The Issue

FPZ was founded in 1975 by Sergio Ferigo's father and produced a high-quality side-channel blower that was successful on the Italian market. Unfortunately, with the passing of the years, the capital owned by the business became fragmented.

In 2002 Mr. Ferigo bought his father's company's shares back with the help of a Private Equity Firm. **His objective** was to eventually become the **sole owner of the company's shares**, and to do so he applied Lean principles.





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The Lean Transformation Model

– Italian stories – FPZ

The solution

FPZ's Lean journey began with the **idea of reducing inventory** to improve service. In five months, they were able to reduce the level of stock in the warehouse by 30%, allowing Mr. Ferigo to become the sole proprietor of his father's company's shares. The Lean Journey continued with the optimization of processes in the production and assembly line areas.





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The Lean Transformation Model

– Italian stories – FPZ (<https://www.fpz.com/storia/>)

The solution

Mr. Ferigo was very keen on developing his people's Lean skills as well as their soft skills, by creating a unified team through:

- Training Within Industry,
- Job Instructions,
- and psychologist –led seminars.

This was really in line with the **second set of objectives** of the System Italia Approach to Manufacturing, focused on:

- developing soft or people skills,
- built on teams and teamwork,
- and action of all team members.





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The Lean Transformation Mode



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– **Italian stories** –

Lean Center, CUOA Business School

A people and company-focused approach

A Lean Center has been running at CUOA since 2006, working with businesses and people with the goal of contributing to the creation of a Lean Society, one that operates without waste, without waiting and without unjustified costs, putting the customer or citizen at the core.

They deliver this information through educational paths and courses, such as master degrees, training programs, study tours in Japan and Italy, projects & research opportunities. The Center continues to produce a generation of Lean-fluent entrepreneurs, managers and freelancers, contributing to Italy's SMEs Lean Transformation.





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The Lean Transformation Model – Italian knowledge stories –

Lean Transformation for Small and Medium Enterprises

by Prof. Arnaldo Camuffo, Bocconi University

Arnaldo Camuffo, a distinguished Professor of Management at Bocconi University, is also the director of the Invernizzi Center for Research in Innovation, Organization, Strategy & Entrepreneurship (ICRIOS). With extensive experience consulting for major Italian industrial groups and authoring numerous books, Professor Camuffo provides invaluable insights into Lean transformations within small and medium enterprises (SMEs).

Understanding Lean Transformations

In his notable work, "**Lean Transformations for Small and Medium Enterprises: Lessons Learned from Italian Businesses**," Professor Camuffo examines two decades of research, analyzing 100 cases of Lean transformations in Italian SMEs. He focuses on 20 successful cases to guide companies on how to embark on a Lean transformation journey aimed at achieving both operational and financial improvements.





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The Lean Transformation Model

– Italian knowledge stories –

Lean Transformation for Small and Medium Enterprises

by Prof. Arnaldo Camuffo, Bocconi University

Characteristics of Successful Lean Transformations

Through his extensive research, Professor Camuffo identified several key characteristics shared by **Italian SMEs** that successfully underwent Lean transformations:

- **Commitment to Transformation:** Successful SMEs display a strong and enduring commitment to transformation, firmly resisting the temptation to stray from their planned course of action.
- **Strategic Value Stream Selection:** These companies carefully select the value streams needing improvement, aligned with their strategic goals, ensuring their efforts yield the most significant impact.
- **Capability Building:** They prioritize building capabilities that sustain the transformation, ensuring that improvements become a permanent aspect of their operations rather than temporary fixes.
- **Leadership and Culture:** Effective SMEs lead by example, embracing the "going to gemba" principle—having company leaders visit the actual workplace to observe processes firsthand. They cultivate a culture of respect for individuals that goes beyond the visible tools and artifacts associated with Lean methodologies.





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The Lean Transformation Model

– **Italian** knowledge **stories** –

Lean Transformation for Small and Medium Enterprises

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Final notes

The insights provided by Professor Arnaldo Camuffo offer a valuable framework for SMEs looking to implement Lean transformations. SMEs can achieve significant operational and financial enhancements by:

- committing to a structured and strategic approach,
- building necessary capabilities,
- and fostering a culture of respect and leadership.

The lessons learned from Italian businesses serve as a guide for companies worldwide aspiring to improve through Lean practices.





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THANK YOU & LET'S STAY IN TOUCH

ABOUT THE ITALIAN TRADE AGENCY

The Italian Trade Agency (ITA) is the government agency officially tasked with supporting the international business development of Italian companies and promoting foreign investment in Italy. With a motivated and modern organization, ITA operates offices in 70 countries worldwide. It provides information, assistance, consulting, and training to Italian small and medium-sized businesses. ITA asserts the excellence of 'Made in Italy' globally, leveraging cutting-edge multi-channel promotion and communication tools.

ITA plays a direct role in promoting exports and fostering cooperation across various sectors, including industry (consumer and capital goods), agricultural technology, agri-food, services, and training. Collaborating closely with Italian Regions, Chambers of Commerce, business organizations, and other public and private entities, ITA's headquarters is located in Rome. Its global network of offices serves as 'Trade Promotion Sections' affiliated with Italian Embassies or Consulates. In the United States, the ITA's Chicago Office takes the lead in initiatives related to advanced manufacturing, robotics, artificial intelligence, and machine learning on behalf of Italian inquiries. The office supports various activities, including conferences, academic engagements, and commercial endeavors. For more detailed information, please visit www.machinesitalia.org and follow ITA on LinkedIn and X (formerly Twitter).

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