



POLITECNICO
MILANO 1863

Master of Science in Management Engineering

Industrial Management stream

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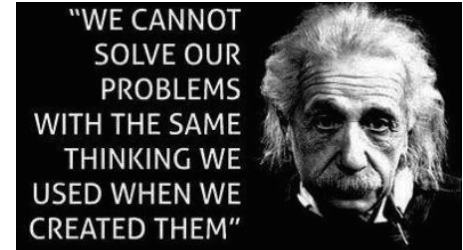
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Academic Year 2020-2021

Scenario and Market Needs

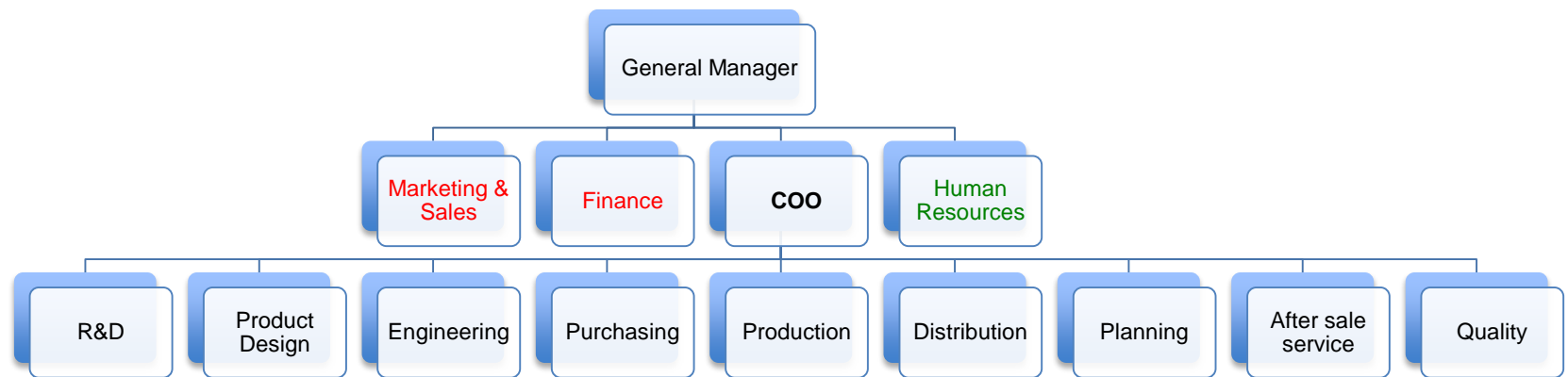
Five phenomena are reshaping the contemporary competitive arena:

- **Globalisation** of markets and production facilities
- **Customisation** of products and services
- **Faster Technology** development and **Digitalisation**
- **Competition** for securing access to critical resources
- **Higher competence level** for all workers, as a significant opportunity to exploit



The development and interaction of these factors make the design and running of manufacturing and service businesses, **much more complex** than in the past, thus creating the need of **a new type of managers** who are not specialized in any single company area, but **are experts in bringing together different competences and in coordinating them: the Chief Operating Officers**

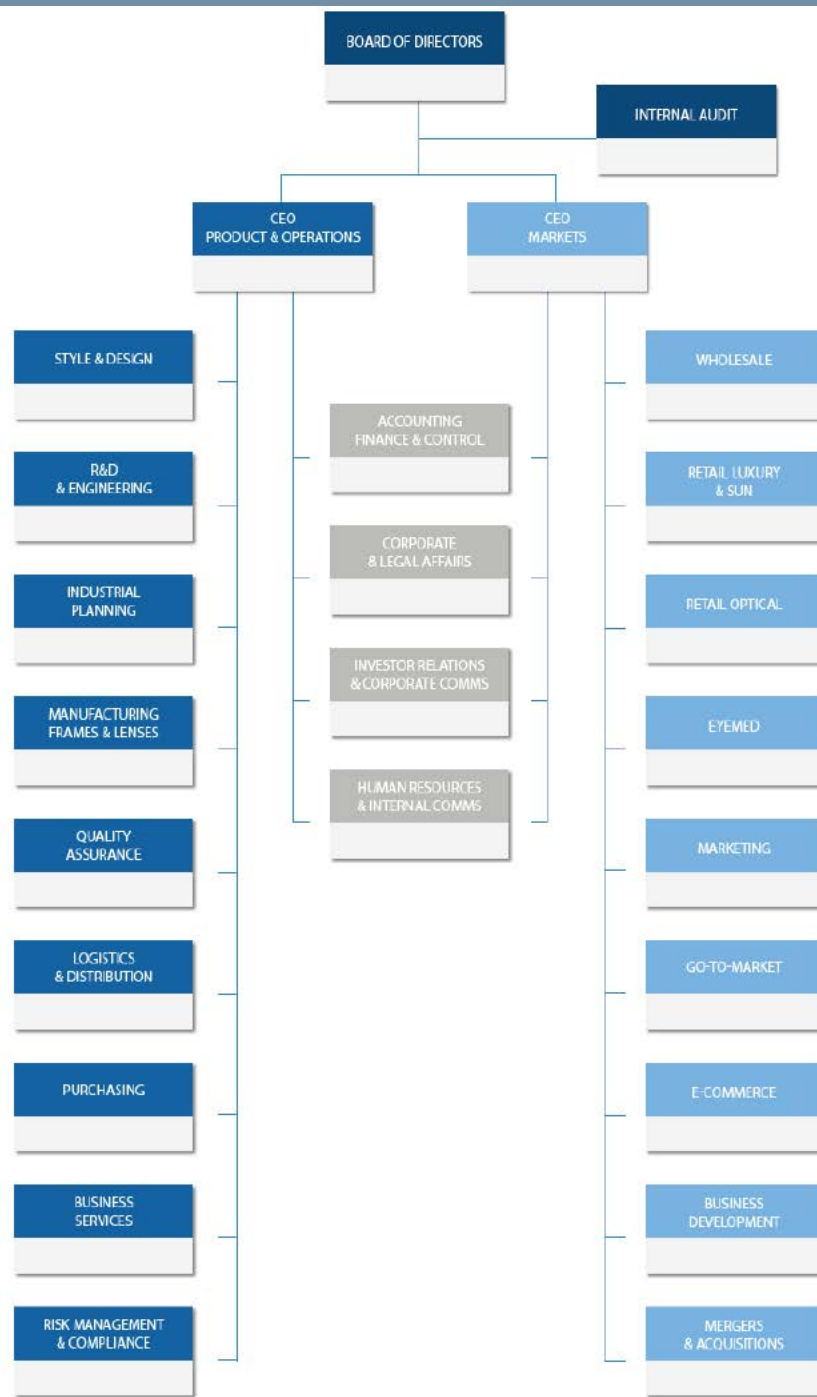
The IM stream is shaping future Chief Operating Officers



COO => SPECIALISED IN INTEGRATING AND COORDINATING

Broad job opportunities because you can start with a job in any of the areas that refer to the Chief Operating Officer, and then climb up!

Tim Cook was COO of Apple before being appointed CEO



Building on the wide competences developed during the first year, the Industrial Management educational project aims at developing managers who build **sustainable competitive advantage** through **innovative production and service operating models**.

The IM stream provides students with competences, methodologies, tools, and real world experience to make them able to:

- run a Company site, or group of sites, in an effective and efficient way
- set up new sites and new initiatives - from the idea to the realisation - e.g. strategic investments for the Company's competitive advantage in the long run
- define operating processes, direct investment in new technologies, develop people competences and assets

Learning Outcomes

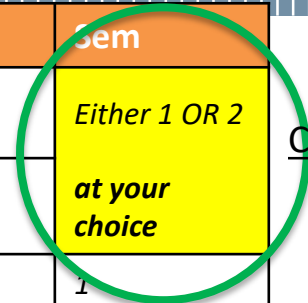
Typical decisions that graduates in the IM stream will take in their positions are:

- **Deciding on the investment in new facilities/sites** in different part of the world.
- **Deciding, planning and executing operations improvement** projects.
- **Adopting of Best Available Technologies** and set technology radical changes as leading a **digital** transformation.
- **Establishing and managing** the realization and delivery of products and services for satisfying customer needs.
- **Planning, executing and recovering large strategic projects** (manuf & serv).
- **Managing the lifecycle of all physical assets** of the company.
- **Developing human capital** by the enhancement of employees' competences and providing safe working conditions and efficient working environment.

Stream Architecture: many choices

The stream you can customise !

Pos	ECTS	ECTS	Courses	Sem
7	15	10	Industrial Management Lab	1
		5	<i>Industrial Management toolbox (models and tools)</i>	
8	10	10	Asset Life Cycle Management	1
		10	Industrial Project Management	1
9	5	5	Operations Risk Management and Resilience	1
		5	Quality Management	1
10	5	5	Additive Manufacturing	1
		5	De-manufacturing	1
		5	Digital Business Innovation	2
		5	International Distribution	2
		5	Product Life Cycle Management	2
		5	Safety Engineering and Management	1
		5	Supply Chain and Purchasing Management	1
	10	10 or 5+5	FREELM	1 or 2
	15	15	Master Thesis	



Choose

Stream Architecture

Key characteristics of the Stream

- **Multidisciplinarity:** Integrates different areas
- Customisation: the stream You can customise
- **Faculty and Managers:** jointly delivered with companies
- **Coaching:** soft skills clearly addressed
- **Problem solving:** different learning approach
- Broad working opportunities (builds competences for more than one function)

MAKE ENJOY LEARN

The Industrial Management Lab

***A Bridge between
Academia and Companies
to boost your career***

The LAB is jointly delivered by POLIMI and Manufacturing or Service Companies, to shape the managers of the future.

***1-2 days/week working in a
Company with its people***

An intense company based improvement project, with you working as consultants

1 Problem
1 Company tutor
1 Methodological Coach

Weekly
Coaching
meeting

**Amazing
Learning
Experience**

A unique added value on your CV

The Industrial Management Lab

During the semester, at the University, groups attend sessions on

Methodology

- Analytical tools
- Modelling tools
- Problem Solving tools

Soft skills

- Change management
- Negotiation
- Conflict resolution

Entrepreneurship

Teamwork

Communication

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Examples of projects

- Implementing **LEAN** in low volume-high variety production company
- Increasing quality and efficiency in a food production plant
- Implementing **digitalisation of a key process** in a manufacturing company
- Opening a **new plant** in USA
- Re-defining the **products portfolio**, and their allocation to plants
- Fraud data: understanding and preventing frauds in a **Bank**
- **Digital opportunities**: improving the customer journey in an Insurance company
- All tablet: **digitalising the logistic** activities
- Applying **IoT** (Internet of Things) in the manufacturing Area
- **Inbound and outbound logistics** and strategy optimization
- Reducing manual wasteful activities and improving service level using **Robotic Process Automation** (RPA)

Projects abroad also! Up to now: 6 and counting

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A Few Feedback from the past years, and our contacts

*“Real **application of concepts and models** studied during past courses...my best course!”*

*“Opportunity to work like a **real consultant!**”*

*“An opportunity to **demonstrate my value**”*

*“I felt **myself important and part of the company**”*

*“Real involvement in companies working life, **and so a lot of responsibilities and trust from managers!**”*

*“An opportunity to **get known and been hired!**”*

Contacts

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