EFFECTIVE

First Strategic Workshop – “Paving the way to effective clustering towards exploitation & dissemination of FoF project results”

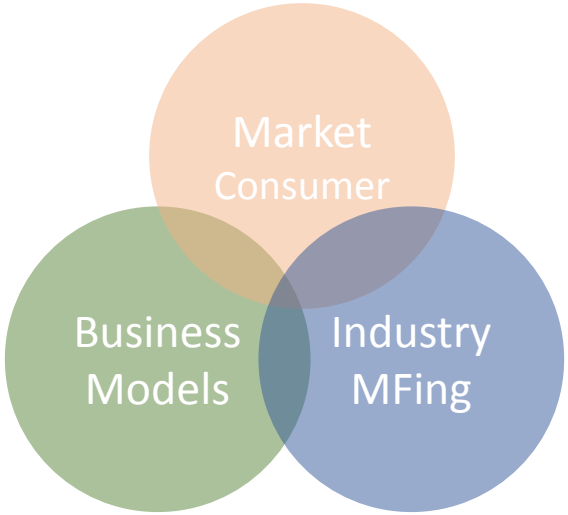
SESSION-1: Strategic Inputs: Business Trends and Market Prospects

Introduction to Session-1: What key global factors will influence the manufacturing world?

FEDERICO BRUGNOLI

Rationale of a session on trends: maximize industrial exploitation of projects

Key Megatrends



Industrial Sector Challenges

- **Medical Devices**
- **Machinery**
- **Production Systems**
- **Consumer Goods**

Technology answers

- Additive Processes
- Advanced Robotics
- Digital/Virtual Tools for Sustainability
- ICT for Value Chain
- Safe Human Machine Interact. &Training
- Design & Customisation

Step 1 **Step 2** **Step 3**

Identified and relevant business trends and market prospects

Global Megatrends that will affect manufacturing

Free Trade Proliferation

Shift in Demand & Global Economic Power

Ageing Population

Global Emerging Middle Class

Need for Customisation

Resource competition & Scarcity

Talent Shortage

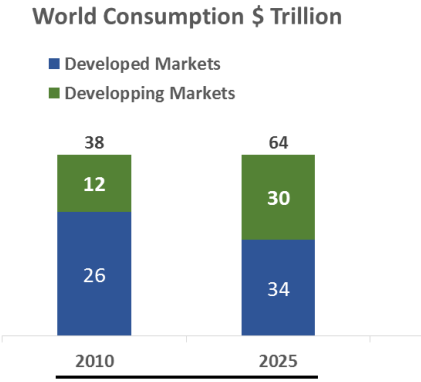
Emerging Bus. Models

Supply chain Innovation

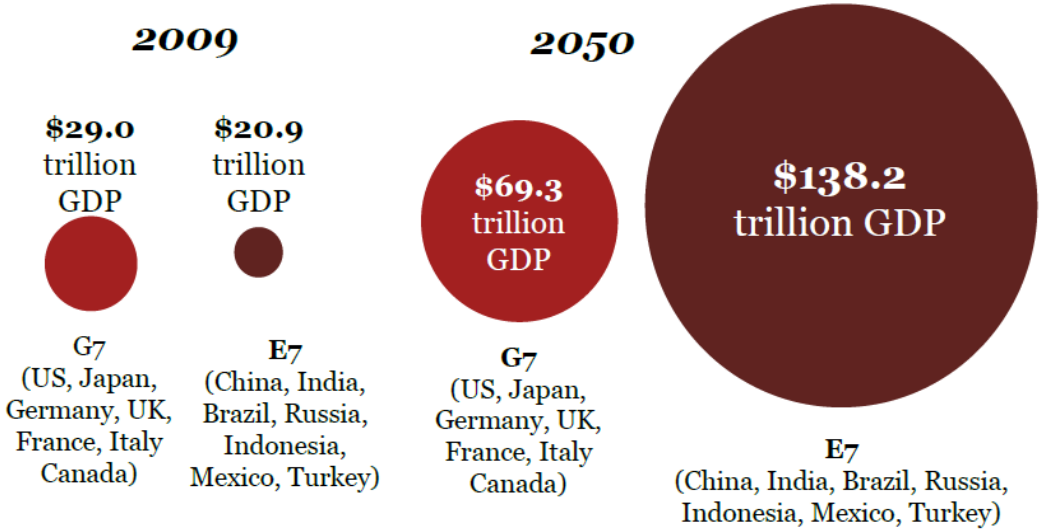
Shift in Demand & Global Economic Power

BRIC and other growth countries will transition from centers of labor and production to consumption-oriented economies.

By 2025, developing economies will account for nearly 70% of global demand for manufactured goods



- Different competitor profiles from new geographies and sources
- ***Replacement of multinational companies in emerging markets (China, Kenya, Indonesia, Vietnam etc.)***



ECONOMIC GROWTH HAS SHIFTED TOWARD DEVELOPING ECONOMIES. TODAY'S BUSINESS LEADERS NEED TO IDENTIFY WHICH MARKETS HOLD THE GREATEST GROWTH POTENTIAL.

Global Emerging Middle Class

The so-called "Next 4 Billion" → Consumer Goods Market will increase by more than 50%,

Challenges and opportunities:

New value proposition

Understand demand→ what does the customers of the next 4 Billion aspire to and do they value beyond the low cost?

Innovative Bus. Models

Creating supply→ how will companies create supply to optimise satisfaction of new and increasing demand?

Shift in the mindset

Managing the Consumer and Organisational Mindset→ which research methodology suits better to understand the needs of new consumer segment?

HUGE NUMBERS OF CONSUMERS ARE MAKING THEIR WAY UP FROM THE BOTTOM OF THE ECONOMIC PYRAMID TO FORM AN EMERGING MIDDLE CLASS

Global Ageing Population

FACTS:

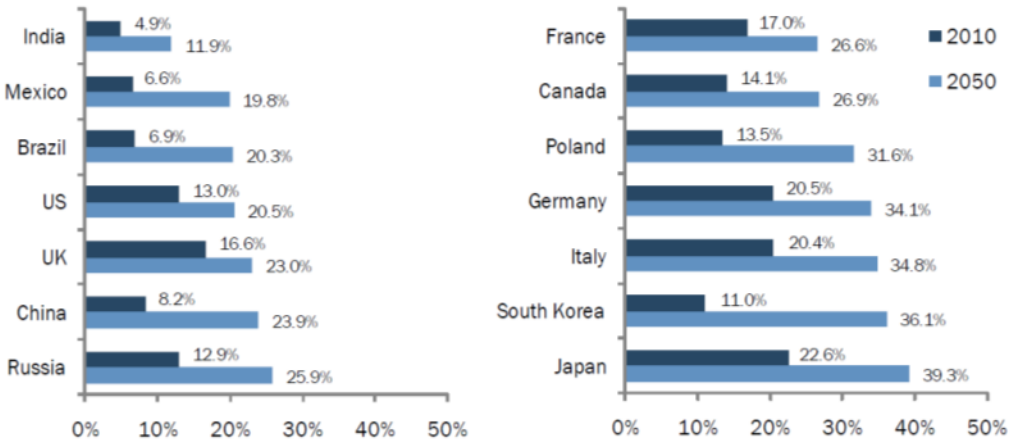
- The coming demographic transformation known as global ageing, will impact on economic performance, social and political stability

- The most rapid increases in the 65-and-older population are occurring in emerging countries, which will see a jump of 140% by 2030.

Challenges & Opportunities:

- Graying workforces are likely to become less flexible, less mobile, and less innovative.
- Growing labor shortages
- *Ad- Hoc* product design, to meet the specific needs
- Development of age-friendly services and settings

Elderly (Aged 65 and Over), as a Percent of the population, 2010-2050



BETWEEN 2000 AND 2050, THE PROPORTION OF THE WORLD'S POPULATION OVER 60 YEARS WILL DOUBLE FROM ABOUT 11% TO 22%

Need for Customisation

*New consumer will require **individualized performance of new products**, selecting best service by deepen **awareness on their needs** and by a close selection on the global product market.*

Consumers Requirements	Company Challenges
Willing to "trade down" towards more **affordable brands. Brands VS Quality**	**Adjusting prices** and distribution strategies New marketing strategies
Growing emphasis on **personal and environmental health**	Focus on the health benefits and **environmental impact of products.**
Increase of city dwellers: requests for portable packages to be easily carried	Implications for retailers and consumer. ATTENTION TO: **Convenience**
Different products for elderly	New product design to be easily used by elderly hands.
Keen desire to **co-create and customize** products to their specifications.	Design of **Platform Customisation**

NEED TO ENFORCE THE INTERACTION BETWEEN COMPANY AND FINAL USERS AS WELL AS THE USER-LEAD INNOVATION AND THE INFORMATION EXCHANGE IN CONSUMERS COMMUNITIES

Free Trade Proliferation

Around the world, trade barriers are generally on the decline, and global trade has dramatic grown, **creating a complex web of east-west, north-south, and intra-regional trade flows.**

Trade in manufactured goods is a key driver of structural change

- **revenues from trade** (generating resources for high-tech investments);
- **pressure from buyers** (accelerating learning and productivity);
- **access to technology;**
- **imports of capital goods.**

***Emerging Sub-TREND*: Protectionism in manufacturing sector. Government intervention, stimulating domestic investments by supporting local production**

THE MULTILATERAL TRADE AGREEMENTS INCREASED FROM FEWER THAN 50 IN THE 1980S TO AROUND 250 TODAY. MORE THAN 3/4 OF THESE ARE CROSS REGIONAL TRADE AGREEMENTS.

Supply Chain Innovation

Trade proliferation and global access to digital technology have been key drivers of the expansion and disaggregation of today's supply chains

The new approach to supply chains starts with:

- **Being agile and robust** to move from cutting costs to **enabling new processes** and making corporations to create value across the entire enterprise.
- **Gaining access to big -data**. Companies will be able pass from forecasting to analysing trends in real time.

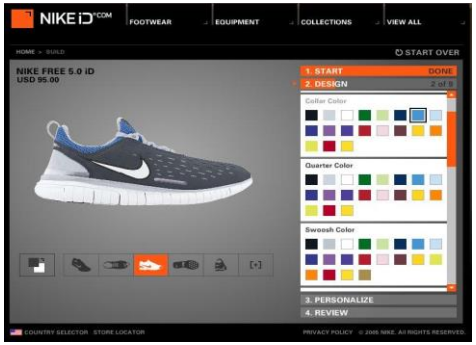
- **Being collaborative**
  Suppliers seen as both order-takers, and provider of product expertise.
- **Expanding Network.** rethink the geographic location of their supply chains, including finding sources closer to home.

INNOVATIVE SUPPLY-CHAIN STRATEGIES PLAY KEY ROLES IN THE HIGH-PROFILE SUCCESS OF FIRMS AND SUPPLY-CHAIN INNOVATION IS NOW RECOGNISED AS CENTRAL TO THE DISRUPTIVE SUCCESS.

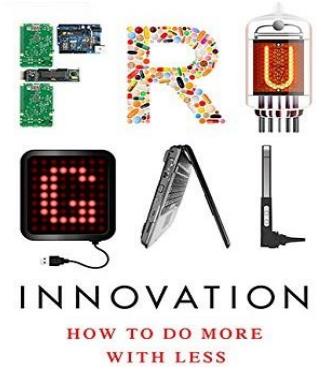
Emerging Business Models

The new business model must create:

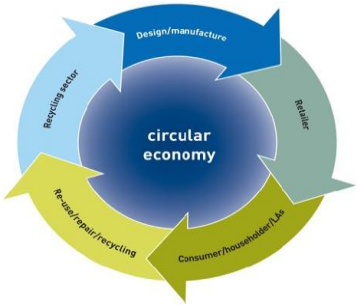
- **Ecosystem Collaboration** - Partnerships with the unorganised sector, the government (PPP), and other stakeholders
- **Modular Approach** that will increase logistical efficiency and lead to lower costs, of benefit to both the company and the consumer
- **Smart reach** by a cluster approach is needed to deal with the diversity in these markets.



Mass Customisation



Frugal Innovation



Circular Economy

Ecommerce

TO TACKLE WITH CURRENT EVOLUTION OF MANUFACTURING, COMPANIES START TO ADOPT NEW BUSINESS MODELS THAT ARE MORE RESPONSIVE TO SWINGS IN DEMAND OR INPUT COSTS AND FASTER PRODUCT CYCLES.

Resource Competition & Scarcity

Facts:

- In the short term, countries and companies react to rising scarcity and prices of materials, by **stockpiling or hedging**.

i.e China monopoly of the REE market, supplying 95% globally. Control is tight, with the Chinese government implementing tax, quota, and administrative measures to keep prices for REEs at record highs.

Implications:

- In the longer term, success will be marked by **discoveries of alternative elements**, breakthroughs in materials sciences, and more efficient practices governing the use of materials.

companies must develop short- and long-term solutions to address the need for critical resources.

GROWING MATERIALS RESOURCES COMPETITION AND SCARCITY WILL FUNDAMENTALLY ALTER COUNTRY AND COMPANY RESOURCES STRATEGIES AND COMPETITION

Talent Shortage

- **In the European Union countries**
  The industrial diversification lead to a growing need for medium- and high-skilled professionals.

- **In Brazil, China and India**
  The rapid transition towards knowledge-intensive manufacturing is expected to create shortages of both high-skilled workers (such as engineers and scientists) and medium-skilled workers (such as technicians and factory workers) by 2030.

COMPANIES AND COUNTRIES THAT CAN ATTRACT, DEVELOP AND RETAIN THE HIGHEST SKILLED TALENT – FROM SCIENTISTS, RESEARCHERS AND ENGINEERS TO TECHNICIANS AND SKILLED PRODUCTION WORKERS – WILL COME OUT ON TOP.

Our Experts

Cristina Simonato, DemoCenter-Sipe

Medtech 'Made in Italy': the industrial experience of the Mirandola District

Daniele Vacchi, IMA S.p.A.

SuStAInE: a European standard for harmonization of the Automation industry

Omar Degoli, Federlegno Arredo

Italian furniture industry: lessons to be learnt from a world leading manufacturer