Introductory Lectures

4th February 2016

"From the millenial fashion consumer to the millenial footwear factory."

This session featured two presentations from **Ms Jayne Estève Curé from Jayne Fashion Agency, UK and Mr Sergio Dulio from AtomLab. Italy** which had as its Theme - **"From the millenial fashion consumer to the millenial footwear factory."**

Ms Jayne Estève Curé from Jayne Fashion Agency, UK focussed her presentation on 'Understanding the Millenial Fashion Consumer' and commenced her presentation with a '**a concise portrait of the millenial generation'** whom she described as the the world's current young adults and were those born between 1980 and 2000 and were between 15 & 35 years of age. She added that they were also named as the Y Generation, the Echo Boomers, the Net Generation, the Boomerang Generation or the Peter Pan Generation. Ms Jayne underlined that the Millenials were the generation that made up the **largest segment** and had the **most future purchasing power** in the fashion industry and giving Statistics, she stated that their Estimated world combined purchasing power globally was to the tune of US$10 trillion and out of this it was US$2.45 trillion for apparel. She added that about US**$600 billion was** spent on apparel in the US and it was estimated to grow to US**$1.4 trillion in 2020.**

Ms Jayne stated that millenials were complex consumers with increasing demands as they are mobile & tech-savvy, multichannel buyers, money conscious & frugal, Social & socially conscious, brand addicts, Trend Setters and highly sensitive to change. She emphasized that **the Millenial Fashion Consumer was sensitive to a new set of values** that had emerged from the economic, social and political crises. She added that these New expectations and requirements were more **qualitative** and **identity based**.

Ms Jayne described that the millenials were experiencing an ecological awakening and were thinking on the lines of No to greenwashing!, What can I do for the planet?, Let's partnership to progress together!, Now is the time to act responsibly & ethically! and Sustainability is more than a concept! Let's embark on the eco journey ! She stated that emotions & experience were at the heart of their value system and they wanted to **experience emotions** and **be enchanted** by the brands they wanted to love !

Elaborating further Ms Jayne explained that the Millennial Fashion Consumer was a digital native, hyper connected & social! and was part of the first generation born with the web ! She stated that the millenials live in an online community and were hyper connected to social platforms like pinterest instagram and the fashion millenials were followers of fashion bloggers. They were also smartphone addicts and loved smartphone fashion apps and were always searching for new smartphone fashion apps.

She added that Fashion brands of today have to seriously rethink their business models and adapt their strategies at all levels to positively engage a new and far more complex and challenging consumer who is emerging in a fast-changing international environment. The democratization of fashion, an ecological awakening, the digital revolution and years of disruptive economical changes ranging from financial crisis to the emergence of rapidly growing new markets have driven the fashion consumer to radically change by adopting new purchasing habits, she opined. According to her the consumer could be described as a "consumer' actor" with a wish to master their purchases in tune with their personal desires and explained that today's new fashion consumer is often a digital native, is highly sensitive to encountering a personalized and seamless purchasing process allowing the enjoyment of a unique shopping experience whatever the retail channel. This new fashion consumer loves fashion and particularly shoes that they buy more and more online expecting to discover and feel much more in a store than on the internet, she added.

Ms Jayne stressed that they were highly sensitive to the use of both technology and human relations and were drawn to the physical store that provided both an interactive and fluid process that optimized their in-store customer experience and continued by stating that this new consumer buying behavior pattern was forged by the challenging growth and importance of omni channel strategies that aimed to achieve a 360° customer relationship & experience and added that in this context, brands were challenged by the need to redefine the contours of the type of relationship they wanted to build with their customers and develop means and actions that would enable them to enrich their commercial performances.

According to Ms Jayne, fashion brands faced key challenges to seek ways to place this new consumer at the heart of an all-encompassing multi-channel strategy with a view to create proximity and to engage in a direct relationship and experience with them and emphasized that Success in the store would come through adopting a personal shopper approach to one's fashion customer... in this way trained sales teams would become the best possible ambassadors for their brand capable of optimizing a personalized customer experience, she added.

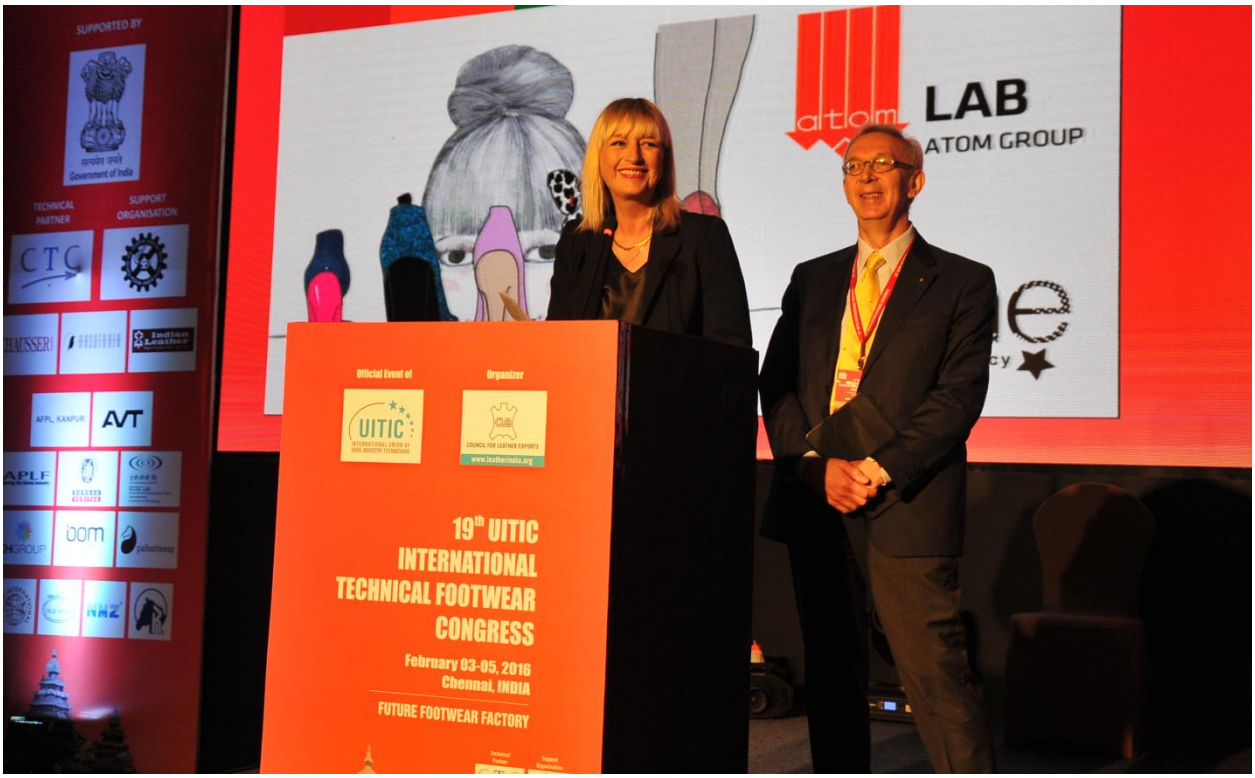
In conclusion, Ms Jayne observed that with this objective in mind, physical stores had a major role to play alongside digital channels by putting the consumer at the heart of their strategy De facto and added that they had the potential to represent the incarnation of proximity and build a direct relationship with the consumer who could enjoy a multiform experience with the brand. She concluded by stating that 'DON'T FORGET THE Z GENERATION IS ON ITS WAY!'

Mr Sergio Dulio, Head, ATOMLab, Italy dwelt on the **'Challenges in Manufacturing'** and listed the challenges as:
CHALLENGE # 1: ON DEMAND PRODUCTION where he queried "Is there any better way of being sustainable than producing only what a consumer will certainly need?"
CHALLENGE # 2: THE EXPERIENTIAL FACTORY where he explained how Factories become places where consumers go and see how shoes are made and shop for their true values: no workshops but work and shop outlets
CHALLENGE # 3: THE *RAM* SHOE FACTORY which elaborated on RAM -Robot Assisted Manufacturing which ensured that Factories became attractive places for workers: healthy and safe environments where humans perform rewarding jobs while repetitive and alienating ones are left to machines and robots
CHALLENGE # 4: HIGH TECH – HIGH TOUCH where he gave the example of The Human Digital Fingerprint : a "signature", based on advanced RFID technologies, that helps consumers to appreciate the human touch in the product they buy

CHALLENGE #5:HYBRID AND 3D PRINTED SHOES where he described about two types of consumers namely PRO-SUMERS: consumers become producers and CON - WORKERS: a new breed of informed and aware consumers.

Mr Dulio opined that if dealing with new consumers habits and trends and new purchase attitudes would pose major challenges to fashion and shoe brands in the I future, it was even more true that these mutations could have a disruptive effect on manufacturing as we know it today and on the way shoe factories of the future would look like. He explained that the scope of the second part of his presentation was to analyse how challenges on brands that need to cope with an evolving and proactive consumer, translate into challenges to the company manufacturing system and on its related technologies. He exposed the audience to a number of suggestions inspired by the analysis presented in the first part such as: the on demand challenge, whereby highly demanding consumers with fast changing desires and a growing sustainability push will call for the capability of producing only what is really needed and purchased by the clients, with limited wastes and low energy consumptions. He queried 'Which enabling technologies would this require?' and went on to talk about the "experience "domain; the whole product choice and how purchases would have to be more and more based on experience; why not extending this experience down to the manufacturing steps? He added that Factories would have to become "experiential" transparent, places where consumer could go and appreciate, right and there, the value of what they buy and continued that factories would also have to be attractive places for workers: healthy and safe environments where humans were offered rewarding jobs while repetitive and alienating ones were left to machines.

Mr Sergio Dulio opined that added value tasks for humans should be under the spotlight and chain work tasks for robots, working side by side with them and added that these would become common sights in the "glass factories" of the future. A "human signature" based on advanced RFID technologies, would help consumers to appreciate the human touch in the highly automated factories of the future, he surmised and finally stressed that additive manufacturing and 3D printing with their disruptive potential on product and processes and the "democratization" power they bring along where consumers became workers, creators of their own products and workers were a new breed of informed and aware consumers would be the order of the day and added that barriers would fade away in a continuum that would have profound effects on companies and factories of the future.



In summary, he stated that the THE FACTORY OF THE FUTURE would need:

- **Intelligent "human centric" automation**
- **Less specialised, more versatile machines**
- **Robots as servants**
- **Flexibility as a must**
- **Distributed control intelligence**
- **RFID for tagging and tracking**
- **Integration of additive technologies**
- **New CAD tools for new products**
- **Technologies for circular economies**

Session I - Part 1

4th February 2016

The title for this Session was
"A Manufacturing based on the needs of the consumers"

This Session was chaired by Mrs Satyam Srivastava, Footwear Design and Development Institute(FDDI), India and Mr Uwe Thamm, ISC, Germany.

- The Introductory Presentation in this Session was by **Mr Claude Eric Paquin from FFC, France** who spoke on **"Consumers are always right, but do they really know what is right for them? How can a shoe company work under such uncertainties?"**

Mr Paquin opined that today's world is a world of paradoxes and the Markets are more and more global, but consumers, at the same time, want more personalized and customized products. He stated that Consumers wanted to differentiate themselves from the mass but at the same time, they behaved more like flocks, choosing products they were not specially prepared or wiling to purchase, they wanted "the must have" of the moment and so on. He then dwelt on "How to respond to these paradoxes?" and added that independent shoe companies had several solutions: a strong brand, a well-defined market position, a strong domestic base, to be capable to adjust its offer to local requirements but still pretends it is the original product to its supply chain.

He cautioned that if one were a generalist then this would be the most difficult road to success because today one must compete with global players (large 'retailers and high fashion brands) and added that for one's future, one must find for oneself some strong market niches where one could add value for the customers. He stated that many different roads existed where one may be good at and which one could explore in order to differentiate oneself from one's competitors. Mr Paquin also advocated taking advantage of the new digital technologies, introducing new materials and components, developing a real recycling policy, developing products especially designed for one's customers' wellbeing.

In summary, he advocated the following steps, the manufacturing companies need to take :

- **Step 1 – Launch a SWOT analysis of your Brand**
- **Step 2 – Think about your communication strategy, build your brand image**

- **Step 3 – Think about your distribution strategy**
- **Step 4 – Adjust your supply chain**

➢ The **Second Speaker** in this Session was **Ms Elisa Lopez Alaniz from CIATEC, A.C., Mexico** who spoke on **"Integration of the Footwear Design and Development area in the Modern Factory."**

Ms Lopez stated that Innovation is not a magic spark that generates a great idea, but it is a conscious integrating process of market needs with production parameters and added that still, it is a formula that is not easy to achieve. She explained that the design and product development activities, as the initial part of the manufacturing process, are responsible for considering and in its turn integrating issues such as brand identity and fashion, as well as the creation of specialized products that meet specific performance needs of the users and further elaborated that the modern factory must be characterized inter alia, by having an area of design and development of footwear that meets three conditions of integration to really be a key element in the value chain of the shoe. She enumerated the first condition was to have human elements, research, technological development plus innovation for proper materials and means of communication to enable it to capture fashion trends and other demands of customers and the environment. The second condition, she added, was to be able to transfer its developments and new products to the factory production lines, so that there were real products of the original designs. She added that the third and final condition was that there is a continuous flow of information or else feedback from the manufacturing areas to the design area, with data on the different limitations of materials, equipment, batch volumes and workloads, among other things, that ultimately determine what can effectively be made and when.

According to Ms Lopez, in footwear design the technical knowledge and experience of the stylist of footwear are determinant in the result of the product and she listed out the Emergent technologies as being: Distributed manufacturing and Additive manufacturing. She also highlighted that the DIY "maker movement" involving '3D printing' represented changes in New Product Development, where the Customers define their needs resulting in Mass customization. She stated that Product aesthetics, Quality and Functionality were key to have access to information which opened new decision aspects of purchase including the social responsibility for the experienced user.

Ms Lopez opined that the **product specialization** had managed to differentiate the personality of the brands, and it had been the best tool to incorporate the **R &D into the productive processes** and she explained how, In footwear factories, the implementation of **technology** (CAD/CAM/CAE) had

allowed to increase **efficiency** in process, as well as to improve **communication** between departments and suppliers. She stated that Technology present in the department of design like 3D modeling and 3D printing **optimized the process of design** and manufacture of the prototype and added that New production technologies and **innovative materials** made possible the manufacture of very complex shapes possible, permitting a greater **freedom of design**.

She emphasized that R & D created the basis for product opportunities which had to be supported by **specialized technicians**, corporate **efficient communications, brand identity, fashion, technology and marketing** the cumulative effect of which made the **footwear design and development** area as a piece key to incubate the **integration of the information** in the chain of generation of value. According to Ms Lopez, the 'Wow Factor' resided in the **process and materials used and stated that 3D modelling and simulation tools** could have access to important information in initial stages of the process.

Ms Lopez concluded her presentation by underlining that the " creative" **design and engineering solutions** could support the performance and functionality of the footwear reducing its complexity, cost and environmental impact and emphasized that a new successful product is related to an **efficient communication** between all factors that converge on the **manufacture and final user.**

- The **Third Speaker** in this Session was **Ms Vera Pinto from Centro Tecnologico Do Calcado De Portugal,** who spoke on **"Footwear Functionalized at a Nanoscale."**

Ms Pinto commenced her presentation by stating that presently, consumers expectations and needs requires that footwear integrates fashion, emotional desires and multifunctional performances and to meet these challenges and be competitive, the footwear and allied trade companies have put their efforts in the creation of advanced products exploring the remarkable properties of nanomaterials. She added that in footwear the control of bacterial and fungal growth were important to prevent and minimize the generation of malodours and some foot skin problems and continued by saying that these challenges were tackled by developing finishings and leathers with antimicrobial and antifungal properties based on metallic NanoParticles (NPs).

Additionally, she said that, thermal comfort and antistatic properties were important in fashion and casual footwear but an outstanding factor in safety professional shoes which needed to protect the

wearer from work hazards while at the same time offering thermal comfort. In this sense, she continued, the development of more thermally and electrically conductive nanocomposites based on carbon NPs was done to contribute to an improvement of comfort, since such materials would improve the dissipation of overheating which is produced within the footwear during use and security as they reduce the electrostatic charges accumulation. Ms Pinto stated that in the framework of European project 'Nanofoot,' 5 companies and 4 RTD from 3 countries (Portugal, Spain and Italy) worked complementarily and developed finishings, leathers and polymeric insole materials based on NPs. These materials were produced at pilot scale and applied in the development of new nano technological footwear, she said and added that these developments were complemented by the definition of new methodologies to assess the effective environmental burden due to NPs application.

Ms Vera Pinto gave a brief description of the Characteristics and Properties of NPs and gave a background of the 'NanoFoot' project and defined the Research Lines as being: Leathers and Microfibers, EVA Nanocomposites, Nano Technological Footwear and Human Safety and Environmental Impact. She elaborated on the Specifications and Screening of Nanoparticles with a potential to be used in Footwear Consumer goods, Investigation of processing products and coatings/finishing formulations for producing tailor made products and Development of Leathers and Microfibers based on Nanoparticles.

At the end of the Session, **Mementos** were presented to the Speakers by **Shri PR Aqeel Ahmed, Convenor of the 19th UITIC International Technical Footwear Congress and the Regional Chairman (South), Council for Leather Exports, India and Certificates to the Speakers** were presented by the **Chairman of the Session Mr Uwe Thamm from ISC, Germany.**