

**Session IV**  
**5<sup>th</sup> February 2016**

## The title for this Session was “Attractive Footwear Factories and New Way of Management”

This Session was chaired by Ms Francois Nicolas from CTC, France and Mr Miguel Angel Martinez from INESCOP, Spain

- The **Introductory Presentation** in this Session was by **Dr Ferenc Schmel from TECHNORG, Hungary** who spoke on “**Human Drive of the Future Shoe Industry**”



Dr Ferenc Schmel postulated that while the Shoemaker of the past had refined manual skills, the future shoe factory would feature high intelligence and knowledge. He informed that Smart materials, automation and robots, IT controlled processes would be liberally used in the future footwear manufacturing plants requiring highly educated staff capable of managing these high-tech and extended production networks. He stated that Global competitiveness would rely on sophisticated management able to coordinate fashions as well as marketing and technology that require continuous and adequate training. He emphasized that Knowledge generation and application would be key factors in operating shoe factories of the future.

Dr Schmel outlined the Human needs reliant on invention and knowledge and spelt out the various kinds of footwear required for specific purposes and gave the examples of 'Protective Footwear for the Workers, Facilitation Footwear for Sportspersons and Aesthetically beautiful footwear for the Fashion Conscious. He also gave a glimpse of future footwear with exquisite sole solutions and exposed the audience to Energy generating footwear, Shoe technology development, Sewing machine development and Shoe lasting machinery.

**Defining Smart materials as having one or more properties that could be significantly changed in a controlled fashion by external stimuli/conditions, Dr Schmel outlined the Development trends as being focused on Brands and services with a Specialization on products and markets with an emphasis on outsourcing and logistics control. He also stated that use of information technology was very vital especially in the areas of CAD/CAM/CÍM and Virtual Reality which involved use of Real-time/on-line production management systems. He further stated that Application of smart/intelligent materials,**

Application of **biotechnology and** Integration and automation of operations (e.g. 3D printing) were emerging areas and these needed to be judiciously coupled with the **Social** aspects of Pollution control (waste management), Occupational safety and health (OSH) and Corporate social responsibility (CSR).

Touching on the PROBLEMS OF PRESENT TRAINING SYSTEMS he opined that there was a Geographic unbalance between Europe and Asia and there were gaps in the requirements in knowledge and skills and emphasized that teaching should be a full profession and concluded by saying that The FUTURE of PROFESSIONAL EDUCATION & TRAINING lay in it being Modular, Self/Distant, e-Learning and Publicity.

- The **First Speaker** in this Session was **Shri Raja Chidambaram** and he spoke on “**Benchmarking and Beyond: A Web supported Business Excellence Model for the Footwear Industry**”



Shri Raja Chidambaram commenced his presentation by stating that the customer Needs of footwear industry today have transformed, characterized by less volumes, more varieties, and shorter lead times from concept to shelf. Besides this, he added, the customers expect compliance with regulatory requirements too. He said that to be productive and competitive in this environment, the footwear companies have to be process oriented, focussing on QCD (Quality, Cost, Delivery) and improve each process continually.

Shri Chidambaram informed that 'Benchmarking' was a powerful tool for improving productivity and competitiveness in this context and added that Bench marking fostered process orientation and facilitated establishing appropriate performance measures for each business process. He stated that Benchmarking assessed the capability and maturity of processes evaluating them across five levels of excellence: 1-No process 2-Repeatable processes 3-Measured process 4-Managed Process 5-Bench Markable process.

He informed that participating companies in his consultancy assignments appreciated that Benchmarking had helped them to understand which processes they were strong in and processes that needed improvement. Most of these companies felt that Benchmarking should be complemented by a Process Improvement Program.

Laying down the Framework for Footwear Business Process Improvement Model, Shri Chidambaram spelt out that one must align the company's strategic goals with the functional Objectives and process Objectives, Establish Process Performance metrics aligned with objectives covering Q-C-D, Carry out



Periodic measurement and also do a Root cause analysis. He added that there should prevail a Preventive culture and the company should come out with pointed action plans which they should Evaluate after Implementation and map their effectiveness and business impact.

Mr Raja explained the Bench Marking process and Model and informed about the **BEAM- Business Excellence Assessment Model** which enabled individual process Assessment, overall business Assessment and Bench Marking and added that BEAM assessed Process Artifacts and Process results concurrently. He informed that the Process Artifacts were assessed in terms of Sub Processes, Practices and Tools and the Process Results were assessed in terms of performance measures covering Q- C-D.

**Outlining the BEAM Scoring Scheme, he explained that the** Process Assessment (Artifacts) was done on a 5 point rating scale for each business process and the Result Assessment was done on a 5 point rating scale for each business process. He also stated that the Overall Business Assessment was done on a 5 point rating scale as a composite of process assessment and result assessment.

He elaborated that the need now was to move up from Benchmarking to sustained process improvement leading to overall business improvement and for this purpose a Process Improvement model was envisaged where the BEAM model was superimposed on Process Improvement elements.

Shri Raja stated that such a model would encompass:

- Business Vision and Mission
- Policies and Strategies
- Business Plan and Objectives
- Processes and Process Objectives
- BEAM Assessment
- Gap Analysis
- Action Drivers and Action Planning

**In Conclusion, he said that Benchmarking should be followed by a sustained Process Improvement Program and the best way to enable this was through self-assessment by the companies so that they could do it year on year and added that the self-assessment by the companies could be supported by a web application.**

- The **Second Speaker** in this Session was **Mr Ivan Kral from UNIDO** and he spoke on **“Future Professional Training in Leather Based Industries”**



Mr Ivan Kral queried the audience as to “Where do knowledge and skill come from?” and added that this was a question which was raised during various congresses, conferences, event blogs and articles during the last couple of years. He informed that there were still many training and R&D Institutes capable of providing training in different locations other than industry and manufacturing units. He added that perhaps the question could be rephrased to read as “How Knowledge and Skills would reach the trainees?” Dr Kral opined that Globalization had opened for Technology Development and training as there was an Internationalization of production of all kinds of goods.

He explained the dichotomies involved in Increased Production which lead to the Needs For Skills Development which in turn threw up Training Needs which again led to Increased Productivity. He also underlined that Shrinking Subsectors needed an infusion of efficiency over a longer duration which could prevent the Regional shift in the industry. He admitted that there was a severe lack Of Service Institutions, Trainers and Trainees and urged for greater Technology Development to develop unique Training Tools. He added that the New Approach was the ‘TOT’ concept which involved the Training of Trainers.

He explained that there needed to be Innovation and an Innovative approach with infusion of Technology to develop Animated Visual Training Tools, popularize eLearning and provide Remote assistance.

Dr Kral concluded by stating that Trainers and trainees considered blended courses as very useful and efficient. He also stated that New learning and training tools improved the quality of training and the trainers were more confident as training kits were prepared in a professional way including notes and narratives. He added that this allowed trainees and practitioners to improve their knowledge base and learn new skills. He informed that the Training tools developed by UNIDO would be an integral part of the training and learning methods and tools. He stated that all learning material were available online and students had access to training material with a possibility to prepare their assignments.

Dr Ivan Kral then spelt out the Advantages of blended course and added that Footwear manufacturing was a mix of tacit and explicit knowledge and practical part of the training supplemented by theoretical training was essential. He added that Standardized training and learning material with animated visual content was easier to understand and easier to be used for training by trainer (even for the less experienced) and elaborated that Remote assistance - as part of the course was online and trainees were completing assignments at home, it was possible to provide guidance and assistance to trainees either by instructors or trainees/students could interact and assist with questions or various assignments.

He summarized his presentation and stresses that there should be Flexibility so that the participants could prepare their assignments during their convenient time. He also pointed out that there were Costs benefits as remote assistance and online courses allowed access to learning material in remote areas without the necessity to travel. He informed that with current ICT it was possible to have interactive sessions, but also added that practical and face to face training was at the moment difficult to replace but could be a good supplement however.

- The **Third Speaker** in this Session was **Mr Syed Masood Nizam from APEX Footwear, Bangladesh** and he spoke on “**Factory and Worker Management- Successful Case Study**”

Mr Syed Masoos Nizam stated that ‘People’ were the integral power of any organization and nowhere was it more apt than in the shoe factory. He added that the second oldest profession in the world had historically tracked newly emerging large and low cost labour pools across the world from old Europe to USA to Japan to Korea to China to Vietnam to India & Bangladesh to Myanmar to Ethiopia. But the shoe factory of the future, he added, had also changed in the nature of the people that it needed to survive and grow. Core manufacturing competence and specialist knowledge needed information technology and marketing savvy as well to be effective, he opined and in his presentation shared some of the learnings over 25 year of how the narrative had moved from cheap labour to global supply chain and how they needed to create new teams and new kinds of leaders if they wished to be part of that chain.

He spoke about APEX – The People Power and outlined the reasons for manufacturing in **BANGLADESH** which in his opinion was due to Source Diversification, Competitive Labor Price (1/5<sup>th</sup> of China, 1/2 Of India) and Preferential Market Access – EU, USA, Japan, Korea, Australia, India, China. He informed that Bangladesh made 300 Mn SqFt domestic leather every year, possessed 1.7% of global livestock and had an enviable emerging supply chain which included - Packaging, Lasts, Adhesives, Outsoles. He also informed that it had been declared a **'thrust sector'** with a host of policy support with the TED CETP to be in operation soon and the Trans-Asian Highway connecting the East Asian Countries to the Sea Port to be commissioned soon.



Mr Nizam also informed that Bangladesh was the 4<sup>th</sup> Fastest Growing Economy of the World with a steady GDP Growth over the last 8 years, Low Inflation Rate, 5% Predictable Wage Growth for workers and a steady 2% appreciation of BDT against USD (2011 - 2015). He also added that it was the 2<sup>nd</sup> Largest RMG Exporter with a 2015 Export Value of US\$25 bn and a 2021 Estimated Value of US\$50 bn

He stated that this was the new US\$ Billion Industry with a 200 acre Tannery Estate Dhaka (TED) with central ETP to be completed by 2016 housing 134 Export oriented Leather Goods & Leather Footwear Factories.

Mr Nizam then traced the Apex Family Tree and History of Shoes and informed that in 2015 they had achieved ISO14001 standard for the Apex Tannery. He also added that they had obtained the LWG Bronze Rating for Apex Tannery and were the 1<sup>st</sup> to achieve such standard in BD. He informed that their factories were aligned to International Standards with high output of DESIGN, DEVELOPMENT and DELIVERY through its 16 lasting Lines, 20,000 pairs/day, from Ladies to Gents; from Formal to Casual

He said that APEX was the story of its people and it was the 'People's Company' adding that it was the people who made it and it would be the people who would carry it to the future. He informed that they were compliant with globally accepted environmental, social and product standards and were a vertically integrated operation – from leather to final product.



- The **Fourth Speaker** in this Session was **Ms Aura Mihai from Gheorge Asachi Technical University of IASI, Romania** and she spoke on **“Creative Transfer of Skills and Competence in 3D Footwear CAD”**



Ms Aura Mihai informed that their presentation had been developed in the framework of the INGA 3D project - Creative Transfer of Competence in 3D Footwear CAD to VET Professionals ([www.inga3d.eu](http://www.inga3d.eu)). The project aimed to transfer and extend innovative software solutions and 3D technologies for Footwear Computer Aided Design, she said and added that the project brought together universities, research and training centres, adult education providers and IT companies from Romania, Spain, Portugal, and UK. She said that the project products introduced innovative solutions for e-learning in order to test and to validate new teaching methodologies and approaches suitable for vocational training. The INGA 3D training content, its supportive guide as well as the online learning platform was designed, developed, tested and evaluated in line with the best practices identified by partners in their institutions and countries, she stated.

Ms Mihai stated that the INGA 3D project contributed to developing skills and competencies of VET teachers, trainers, tutors, in order to face the future challenges raised by the necessity of adding to the actual curricula in VET institutions ICT skill sets that will enable their graduates to work with highly specialized footwear CAD technologies. She informed that the project had been funded with support from the European Commission, through ANPCDEFP Romania, within the framework of Lifelong Learning Program- Transfer of Innovation.

Ms Mihai highlighted that the aim was to transfer and to extend the **lcad3d+** innovative software solutions and the 3D technologies for footwear CAD with the objectives of transferring the **INNOVATION** from Spain to other countries, namely Romania, Portugal, and UK. It also helped to develop **skills and competencies in 3D Footwear CAD, she added.** The development of **new training content** and supportive **e-learning tools** based on units of learning outcomes led to the setting up of an **Online Learning Platform, she added.**

**She outlined the Peer Learning Scenarios in Footwear CAD which, she informed, were to analyse the needs** for skills and competencies in footwear CAD. Elaborating, She stated that, the **Training program in Footwear CAD was intended to** create footwear prototypes on virtual lasts, including accessories and components; to obtain accurate virtual models using the rendering software and to prepare technical sheets.

She also flagged the four important modules as:

Module I: Footwear CAD

Module II: 3D CAD – applications to Basic Footwear Constructions

Module III: 3D CAD – applications to Orthopaedic Footwear

Module IV: 3D CAD – applications to Fashion Footwear

In conclusion, she highlighted that the Online Learning Platform was successfully launched with 12 complete units that included 40 lessons that had been transformed into e-learning format and were enriched with more than 50 videos.

- The **Fifth Speaker** in this Session was **Ms Elisabeth Rouiller from ISC, Pirmasens, Germany** and she spoke on **“The Importance of Training and Further Education”**

Ms Elisabeth Rouiller propounded that “Man does not live by bread alone” and went on to explain that we all worked to gain our living but what made a company an attractive employer was a question that was long researched and added that the results were unsurprising and merely common sense: People do not want to be squeezed like lemons but they would readily face challenges if they felt respected and supported.



Ms Rouiller emphasized that giving employees the chance to acquire and extend professional skills and know-how was one of the most important levers for a company to make their “human capital” feel supported and added that an initial training was the solid foundation for career development, which needed to be continued, supplemented, and updated by further education (life-long learning).



She gave an insight into the apparently successful and appreciated vocational training system upon which the German footwear industry could build and which served as a model for implementation of the dual vocational training system in numerous other countries. She elaborated that in this context they would like to illustrate the evolution of footwear-related training pathways in terms of initial vocational training as well as further education courses offered and she referred to two research projects ISC Germany was currently involved in: "DualTrain" and "Step to Sustainability." The "DualTrain", she informed, was about adapting and transferring the dual vocational training system to Portugal and Spain and the "Step to Sustainability" was an example of the creation of a new qualification profile enabling shoe technicians to specialise in sustainable manufacturing methods through a b-learning programme.

**She demonstrated the pyramid of human needs where at the bottom of the pyramid were placed the most fundamental needs:**

- 1) PHYSIOLOGICAL NEEDS** (health, food, sleep)
- 2) SAFETY NEEDS** (shelter, not being exposed to danger)
- 3) BELONGING** (love, affection, being part of a group)
- 4) ESTEEM** (from oneself and from others)
- 5) SELF-ACTUALISATION** (find self-fulfillment / realising one's potential)

She added that an Employees Needs

1. **MAKE A DECENT LIVING** = Earn enough to be able to live in decent conditions (necessities + if possible additional luxuries)
2. **SOCIAL SECURITY** = Be covered by health and old age social security / insurance coverage
3. **BELONG TO A TEAM** = Be on good terms with colleagues / gain recognition & respect / belong to a group of SKILLED professionals
4. **ESTEEM** = Be acknowledged & rewarded for exceptional performance
5. **PROFESSIONAL DEVELOPMENT** = Get the opportunity for further professional development, i.e. improve skills and know-how / advance career-wise

**She then queried as to how could employers respond to those needs?**

And answered it by saying that we need to develop a **pertinent strategy** of how to treat their **most important asset**, their HUMAN CAPITAL. She also dwelt on the 'Importance of Skill Development' and highlighted the 'Educational Pathways' available in Germany of **the particularity of the dual training system where the apprentices were guided by internal tutors – experienced skilled workers who imparted their expertise and know-how.**

Ms Rouiller stated that during this UITIC congress, we had been able to catch a glimpse of what the FUTURE FOOTWEAR FACTORY could look like and the Technological progress was exciting and fascinating but cautioned that no matter what technological revolution was there to come – we were still far from a completely automated footwear production.

In conclusion, Ms Rouiller emphatically stated that one thing was for sure that Shoes would always be conceived BY PEOPLE FOR PEOPLE and that the demand for expert knowledge would never cease and added that Empowering of the workforce to acquire the necessary skills and competences would always be crucial for any company's future success.

- The **Sixth Speaker** in this Session was **Shri Md Sadiq from CSIR-CLRI, India** and he spoke on **"The Travel of India in Fashion forecasting for Leather"**

Shri Md Sadiq emphasized that in a globalizing economy, **design** was being perceived as a **new engine of economic and industrial growth and added that** Design and breakthrough innovations could play a pivotal role in positioning of Leather and Leather Product industries in the global arena by value addition apart from enhancing competitiveness. He stated that:

- ❖ **Leather** had emerged as a **fashion product**.
- ❖ Colour, texture and other highlights added to the fashion values of creatively designed leather products. These added significantly to the value realization from leather products.

**"To emerge as a strong global player in the world leather trade, all efforts to take proactive measures to be ready with the fashion leathers when the fashion does emerge, was crucial," he opined and**

stated that “Success in being able to work with **high-end customers** required building design capabilities that enabled us to **offer exciting collections** that could compete internationally.”

Shri Sadiq stated that a lot of attention would have to be paid to honing ‘Design’ capabilities, introduce technologically advanced tools to aid in the ‘design process’ and to develop ‘merchandizing’ expertise amongst our product design teams in the footwear companies.



He elaborated that the “Travel of INDIA in ‘fashion forecasting’ for leather” was an initiative to bring to the fore the ability of the Indian Leather Industry to take pro-active measures in fashion forecasting and design development by providing a scientific leather product development focus in the areas of colour forecasting, range building, design and retail analysis. The outcome envisaged was to strengthen the Indian leather product design capabilities which would be reflected in product quality enhancement, he added.

He prefaced his presentation with a Graphical video depicting the journey traversed by the Indian Leather Industry: A totally traditional industry few decades back, the leather and leather based industry had transformed itself into a vibrant, modern and forward looking one in this rather short period...

He queried as to “What Innovation Dimension was the INDIAN LEATHER INDUSTRY in?” and Where do we slot the Innovation in the INDIAN LEATHER Industry?

He answered that in a globalizing economy, **design** was being perceived as a **new engine of economic and industrial growth** and that Design and breakthrough innovations are pivotal role in the positioning of Leather and Leather Product industries in the global arena. He added that Colour, texture and other highlights added to the fashion values of creatively designed leather products and added significantly to the value realization from leather products.

From ‘**concept**’ to ‘**market**’ encapsulating the stages of SHOE Engineering in a value chain.

He demonstrated a “Value Chain” and highlighted that Design and brand driven value chain needed to be developed as core strengths of Leather Products Manufacturing Industries which was currently **focused in the middle pie of the value chain** engaging in pattern development, engineering and sample prototype development. He surmised that the time to move up the value chain had come



and advocated that to achieve this one had to build not only in-house design capabilities, but also work in consultation with design companies internationally that had a deep **understanding of lifestyle and fashion trends** in Europe and the US, which would continue to be primary markets for the foreseeable future for up market products.

Shri Sadiq also emphasized that **'Merchandizing'** would be another crucial area of attention and synergies would have to be built with international agencies to master this art and added that **a lot of attention would have to be paid to honing 'Design' capabilities, introduce technologically advanced tools to aid in the 'design process' and to develop 'merchandizing' expertise amongst our product design teams in the footwear companies.**

Presenting a CASE IN STUDY, he demonstrated that the Travel of INDIA in 'fashion forecasting' for leather was an initiative to bring to the fore the ability of the Indian Leather Industry to take pro-active measures in fashion forecasting and design development by providing a scientific leather product development focus in the areas of colour forecasting, range building, design and retail analysis. The outcome envisaged, he stated, was to strengthen the Indian leather product design capabilities which would be reflected in product quality enhancement.

He then highlighted the MODEUROP endeavour and gave a brief background stating that MODEUROP was an International Institution founded in 1960 in Zurich / Switzerland by the most important institutions of the leather and footwear industry and it forecasted fashion and trends in Leathers, Colours and Materials for the International market, three seasons ahead.



He also highlighted the Indian success at MODEUROP in Winning Colours, where he informed us that, almost 70% - 80% of the colours chosen, featured from Indian proposals. The challenge and opportunity today, he emphasized, was to capitalize on the winning colours and translate them into fashion products. To give a feel of the MODEUROP Roundtable and Colour Club Meeting, he played a video of the Taj Modeurop for the SS 2015 held in Agra, India and stated that the MODEUROP initiative has been very successful in catapulting India into the foreyards of fashion. He also flagged the recognition received from OXFORD UNIVERSITY acknowledging the publishing of a journal article



entitled "From Fashion Forecasting' to 'Value Engineering' for Leather & Leather Products", that was listed in the Thomson Reuter's Web of Science database.

He proudly informed the gathering that GLOBAL COLOUR SHADE CARD is first released in India giving a tremendous lead time over the competition and the potential of INDIA was recognized and it was conferred with the Presidency of MODEUROP recently and added that the official MODEUROP Colour Cards are now 'Made in India' with suitable acknowledgements to the contribution of CLRI/CLE as well as to the contributing tanners; thereby enhancing the marketability of Indian Leather in International markets.

He then described the transition of the Indian leather Industry as it metamorphosed from the "Black and Brown Story" to a "Colour Story" and opined that any Development can result in success only if it was "sustainable" and added that the Indian Leather Industry offers tremendous potential for sustainable development, both on export front and in domestic market. He underlined that this was why the Leather Industry has been included as a Focus Industry under "Make in India" programme launched by Hon'ble Prime Minister of India in Sep 2014.

The targets for Indian leather industry under Make in India are :

He concluded by stating that we must believe in Technology partnerships with Global majors for decided advantages in the integrated developmental plan of design co-operation as this was the way forward! And concluded very aptly by saying that : Think Leather.... Think India!

At the end of the Session, **Mementos** were presented to the Chairpersons and to the Speakers by **Shri Puran Davar, President, AFMEC, India and Certificates to the Chairpersons** were presented by Mr Yves Morin, President, UITIC. Certificates to the Speakers were presented by the **Chairpersons of the Session Ms Francois Nicolas from CTC, France and Mr Miguel Angel Martinez from INESCOP, Spain.**







### **Remarks by Shri Puran Dawar, President, AFMEC, India**

Shri Puran Dawar, President, AFMEC waxed eloquent about the conduct of the Congress. He expressed his immense joy at being able to participate in a meeting of such a high technical calibre and which was conducted with such metronomic thoroughness.

He complimented Shri M Rafeeqe Ahmed, Chairman of the 19<sup>th</sup> UITIC International Technical Footwear Congress and Chairman of the Council for Leather Exports (CLE), India and Shri PR Aqeel Ahmed, Convenor of the 19<sup>th</sup> UITIC International Technical Footwear Congress and the Regional Chairman (South), Council for Leather Exports, India for their able stewardship and credited them with excellent planning and execution which, he opined, had resulted in making the UITIC Congress such a huge success.



Shri Dawar complimented the speakers for their superb presentations and acknowledged that he had learnt a lot from the presentations made despite being in this Industry for over 40 years. He also thanked Mr Yves Morin, President, UITIC for having this event in India.

