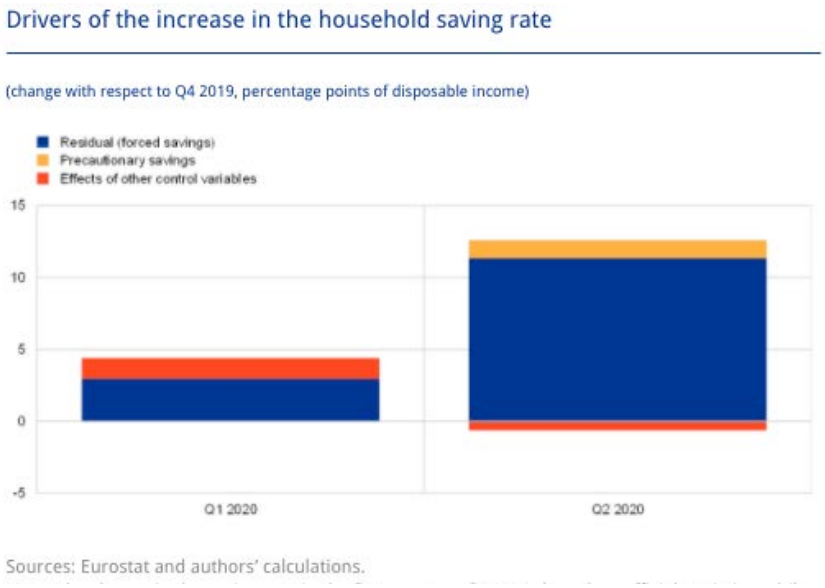
BRICK & MORTAR FASHION RETAIL 4:0 – FASHION RETAIL REBOUND MANIFOLD POSSIBLE POST COVID -19 PANDEMIC, BUT IN A NEW AVATAR.

One need not have a crystal ball to state that by doing same thing over and over again, one can expect a different result. It is true in the case of Fashion retail especially in brick and mortar format. Simply by laying out some video display signage and static signage, these visual merchandising tools are informing but not engaging to commit. They are stereotyped and highly subjective, far away from the context of reality. Expandable Reality based dynamic Videogrammetry and Photogrammetry based on-premise and object's objective reality acquired computational camera visioning and imaging media, where the Context and Content are relatable will be the king in delivering the next generation experience, from walk-in to walk-out of the store with memorable and material takeaways. Physical retail needs to get cyberized, so to have enough exclusive reason and purpose to visit by customers that cannot be replaced by any other channel.

Why the gap forced by pandemic is a boon in disguise for Apparel physical industry: One thing every economy has realized during the Covid-19 pandemic and lockdown, that the savings deposits per household have increased substantially. The below chart of the Eurostat substantiates that people are forced to save and are having a substantial disposable savings, which will drive demand and spending.

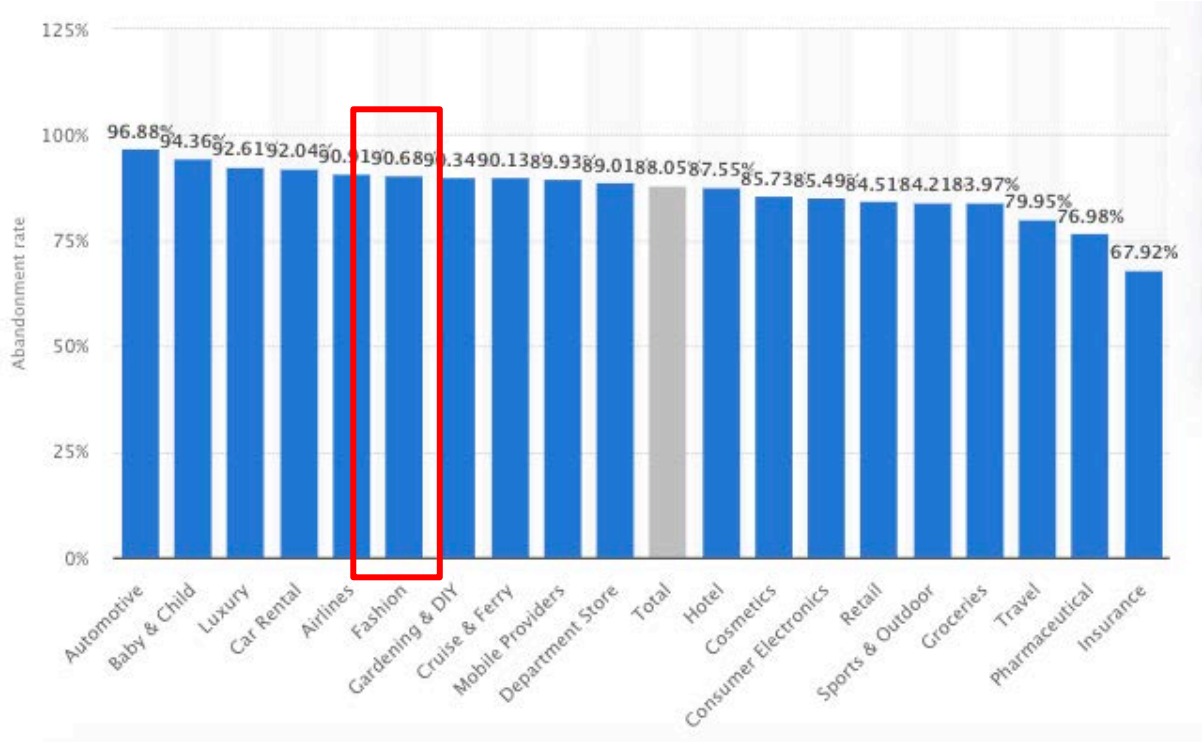


With this economic power and self-confidence boost, Generation Maybe, as is the Gen Z and millennials are generally called, are up for personalized experience and maximum take away. The MAYBE factor is the cue that they ask more, are highly experimental, love dynamicity and variety, are highly Individualistic, have short attention span and ever hungry for Information. As per Accenture retail and IBM/NRF, 82% of millennials and 67% of Gen Z prefer shopping in-store. One

survey shows that 80% of consumers are more likely to make a purchase, when brands offer personalized experience.

Another new demand and essential requirement basket in the consumer's list for the apparel industry is the **face-mask** as an accessory, which means additional human body surface to cover. It's a new category like tie and scarf. People have become more conscious about hygiene and protective dress, which led to few new material and additional apparel category that are anti-viral protective and also would like to know dress material performance pertaining to wash effect, longevity, apparel shear, seam and trim properties as and when they buy and use. All these trends will require brands to build trust not on the basis of tall subjective claims, but claims that can be demonstrated and validated by the customers at the point of purchase.

The abandonment rate in ecommerce at the cart label is very high for fashion - @ 90.68% .



Source: Statista 2020.

Now taking that as the nature of the online business is one thing, yet this gives a clear indication that there is some experience gaps which the providers cannot fulfill , resulting to consumers not converting the selection to a purchase.

What could be a better way, if the physical retailers are having tools to create one-to- one marketing exchange of imagery materials, with differential experience, which cannot be offered by the online channels.

<u>Few advantages of physical retails are</u>

a) Primarily everything within the retail space is real and the experience is multi-sensory excitement beyond the five senses, that can never be offered by the alternate channels.

b) A physical space organized in a specific format, generates an undivided attention of the occupants inside, where probability of inspiration generation to invoice print is 99 %.

Apparel Purchase Journey is different to other retail products:

The burning question and the opportunity in-front of the original brand manufacturer and multi-brand retailer is to leverage a high octane engagement with the customer as they get in-store. The aim is to make them feel personalized, inclusive with differential attachments. The retail 4.0 need to have contents & stocks in both digital twin format of the physical stocks, that occupy the mind-space in a trustful and factful way from each consumers product engagement start to finish – this window is the exclusive, leaving lot of latent and salient traces worth capturing and actioning.

An apparel design is said to good, if only, it is tailorable, seam- able and sellable, while in case of customers perspective a ready to buy apparel is purchasable if it comfortable, fit-able and affordable.

In this conundrum, the determinants have to be rightly chosen, which should be to do transfer - learning and information sharing, Scientifical explainable but in an easy-to-understand user interface and authentically curated crafted content generation capability in-store. The emphasis has to be given by the apparel Industry to drive customer for in-store purchase over more costly and more wasteful online purchase channel.

Future apparel retailing systems will require to process large amounts of complex data due to a rising demand on authentic, logically explainable visually and rich- media content and inclusive integration of the Apparel consumer's journey with the retailer's backend and front end seamlessly. There is a renaissance of **Quantified -Self**, a concept where one as an individual would like to get self -insights, feel self- conscious leading to self – determination, less dependent on the community or outside. The hyper connected new age people are differently wired in the brain to do self-dyadic interaction, where they are having virtual friends, virtual social presence, but that limits them to self-determination or autonomous decision making, where approval seeking process is less understood in physical face to face, their savviness with quantitative over qualitative drives them to be always self- experimenting and self -experiencing.

Fashion psychology states, that choosing and buying of apparel has various endogenous and exogenous requirements varying from impulse to thought through decisions. This like other industry is not having any standard requirement format, leading to challenges in apparel designing, engineering and demand planning that meets all requirements, as the real intent of the purchaser is hardly understood. Those volatile and vanishing high dimensional non-verbal cues are available during the customers buying journey, which till date is left uncaptured. This adds to lot of past based trend or heuristic based stock and stock purchase volume and time forecasting giving birth to enormous bull- whipping effect. Current estimates suggest that apparel industry incurs a loss of

whopping US$500bn annually because of design inaccuracies, material defects, demand and forecast inaccuracies, and goods sold on markdown.

Anthropometric Equilibrium – A concept which captures, measures, and publishes the displacement of the equilibrium balance between the body anatomy axis vis- a- vis the dress equilibrium axis.

One of the reason of dress unsold and rejection is because of mis-fit, various publications show that customers return an estimated 40% of what they buy online, mostly because of sizing issues. Thats a big hole in the pocket of the retailer and annoyance to shoppers. Well mis -fit falls into four categories

a) Functional mis-Fit
b) Performance mis- Fit
c) Aesthetic mis- Fit
d) Habitable mis-Fit.

The random curls, bumps, wrinkles, creases and constraints, the deformations are only realized when one wears the dress and tries it out or performs some function what they intend to use it for. The ready to wear garments fully packed with no possibility to change or alter the dress seam and trim joints at the retail outlet, results to rejection or unsold stock, going for markdown sale or landfills. This are part of the Anthropometric equilibrium disbalance, which with reconfigurable seams and adjustable trims , upon identification can be fixed at the retail outlet, resulting to win-win for both customers and the brand.

Of all the things said, the most important fundamentals as being said by Frank Bernieri, PhD, Associate Professor in the psychology department at Oregon State University, " A well-tailored outfit implies that one is conscientious and play close attention to details." Here the most important operating word is the well-tailored, everyone wants to wear the dress they purchase, this in other words means that the dress fit should match with the persons Anthropometric measurements– Measure of body size and circumference and many more.

Anthropometric measurement of body taken for apparel mass production mostly took when the person is in a standing or/and sitting position. To mention, the knee height in sitting position is not same as knee height mid-patella in standing of the same person. Limitation of the data standardizations in large population scale are many, leading to designing and apparel engineering to one size fit all concept, where a major percentile population left with un-fit cloth.

Anthropometry data should capture and calibrate Physical Dimensions or Anthropometry, Extent of Motion by joints at different velocity, Overall reach Envelope , Body Surface Area , Body Volume and also estimate the principle axis of the moment of Inertia.

As human body is composed of tissues that get distorted when body changes position and are in motion or movements . Lack of simple single measurement technique, determining Moment of

Inertia is a difficult task. But this a very important measurement to answer the phenomena, wherein it is being found that a dress tried by a person , wherein body fit looks well, but yet the customer rejects the same.

As in Fig 1 , illustration, recreated & added , citation of Henry Dreyfuss, Author and famous Industrial designers Anthropometric charts – The measure of man, to explain the wide Anthropometric data, as mentioned above that defines the human factor engineering.

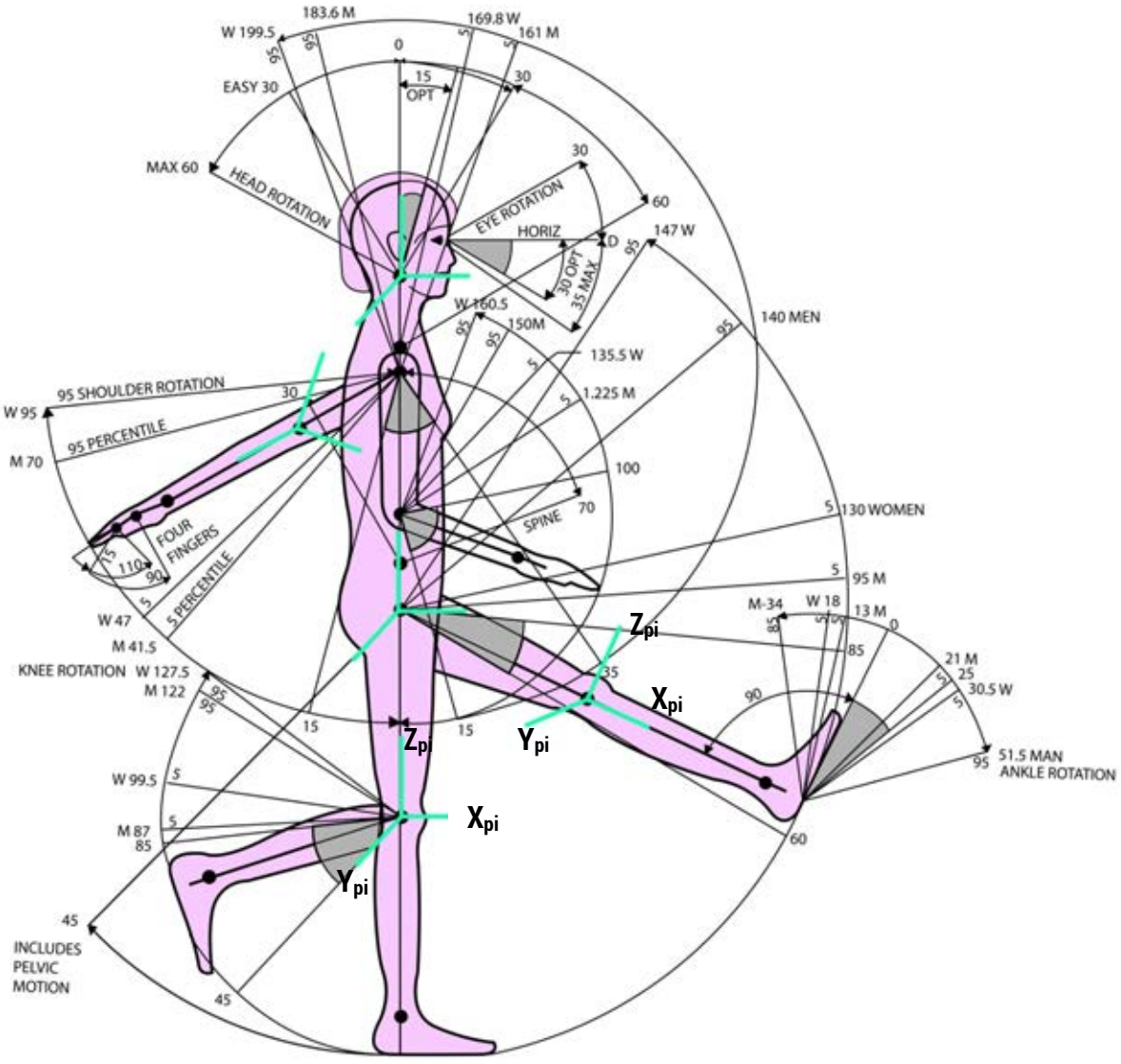


Fig -1 : Anthropometric reach Envelop

The industry mostly uses three different categories for the human body shape - endomorphic, mesomorphic, and ectomorphic. The clothing industry should focus on specific measurements of the body rather than general categories and create more body shapes to satisfy customer needs.

The traditional way of measuring takes into account only selected dimensions of the human body; this does not reflect the “true" overall body shape.

The dimension tables used by the apparel industry are based on the fourth anthropometric photograph taken between 1987 and 1989. To the date, these table are being used. Different human physical attributes from the same individual seldom have the same percentile ranking correlation with different body parts. For example, a 5th -percentile female in stature may have a 20th - or 40th -percentile arm length as per the standard database of Anthropometric data. So it should not be a surprise, if you find the body stature of your shirt is fitting properly, but the arm lengths looks longer.

There are various other details which could fulfill empirically the performance and functional fit, or what Motion Imager call is the Functional equilibrium range, Performance Equilibrium, Aesthetic Equilibrium of Dynamic POSTUROGRAPHY and photogrammetry expanded reality computed and provided on the spot to the customer using these tools.

The proof and evidence in the form of image on a Tensor manifold mini screen and a streaming video on a LED/LCD monitor, will surely allow customers have an INDULGING, IMMERSIVE and INFORMATIVE experience with expanded reality super imposed on them or about the product they choose to select. That is the edge which, only walk-in-the store customers can experience and get a satisfaction translating into a never before transparency, translating into additional value with up-sale.

Translate that into obtaining real time – Per retail Population Anthropometric empirical database. If data is the new oil, then those temporal -spatial-motion data of customers are of high carat and high octane value which generates real-time actionable insights and unbiased product empirical feedback, with many more giveaways. Owning this new media format and content producing tools by the original brand manufacturer, that can be viewed only on the specific media type, the ownership on the data and the control to extract multi -dimensional insights will give a repository of Intangible and tangible assets for continuous and fast positive outcome able decisions. Those data can be real time accessed by the backend Designing and apparel manufacturing team and the production department, to those episodical expandable reality images and 3d Digital twins POSTUROGRAPHS – the Measurement beyond a static body postures, using empirical calculation of the visiting customers. This will enable to streamline producing more personalized and fit-able to the local retail customers, where the Anthropometric specifics are factored. Human centered designs using those autonomously acquired Anthropometric and apparel performance on various scenarios will reduce return per hundred units sold and increase up-sale and add new design and new product with more accuracy to the loyal and local customer fraternities, that can be monetized by the retailers. This pre purchase experience can only be realized in the retail floor, where the customers become the fit model for the brand and also have a recall value to come again and again, as they also get value for the money and time spend.

PIXELICK AND VOXELART STUDIO – The New Avatar of Retail stores: The new age brick & mortar retail store format need to be revamped as store with media and high dimensional rich

contents and expanded reality motion and static graphics .The Founder of Motion Imager , Mr Saha , states that Motion-Imager is developing those break-through technology capability .These technologies can show the Anthropometric Equilibrium shifts between the Body principle axis and the Dress movements Principle axis of moment of inertia in segmented and composite way, using the Coded computational Camera and the Display screens by generating instant annonymised Digital twins of the customer to measure and quantify the Fit on oneself, to self-determine and self-actualise the next action.



Fig 2: Dynamic Videogrammetry & Photogrammetry Streaming & Image Casting in Apparel Pixelick & Voxelart Studio , using Motion Imager Camera Visioning Platform. (Rep)

Digital twins of each customers or fellow customers on wearing the real dress will ease out in self-determining the selection, Conceptualization , Comparison and Collaboration resulting to quick conversion per customer.

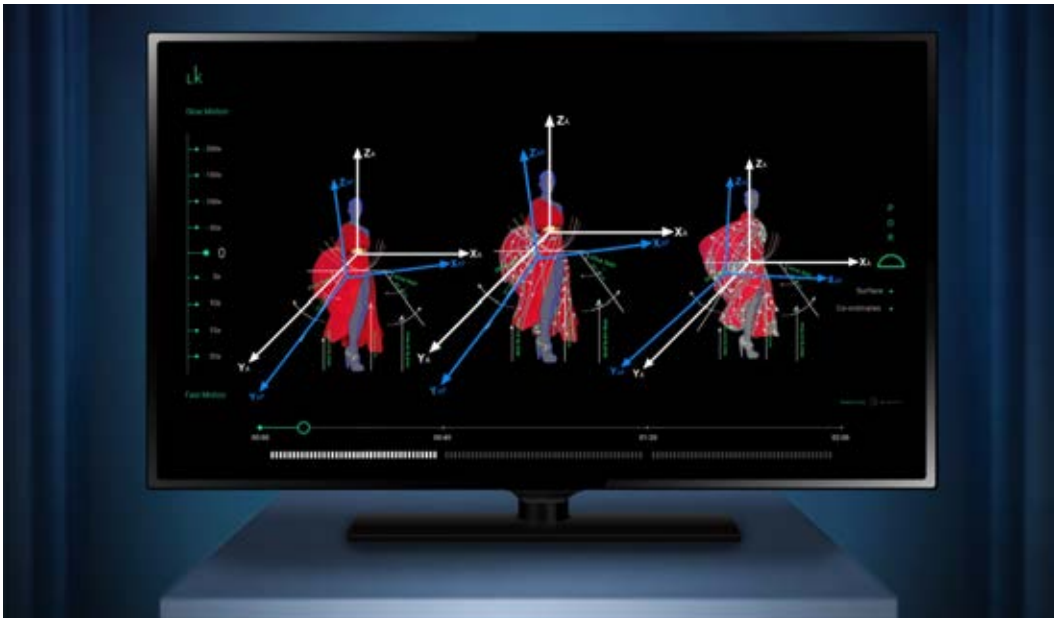


Fig 3: Anthropometric Equilibrium Posturography Immersive Motion Graphic Video produced autonomously using Motion Imager's Camera Vision system.

The development and collaboration across an original brand manufacturer or Multi brand retailer across various stores cross- country or cross- region of the Digital Twins being produced will also eliminate the monotony of running -in- the- loop standard advertisement and promotional contents signage repeatedly inside the store for many days. Dynamic Expanded -Reality videogrammetry and photogrammetry , informs lot of the dress motion dynamics explanations, curls & bounce formation and deformation, multi -profile aesthetic and performance score charts in quantifiable units and scale that are super imposed on the individual object and its relative context. The per-Apparel Digital Tags as Photogrammetry Image, giving huge decisive actionable insights to the retail floor sales & merchandising team in dynamically changing the graphics content. The physical retail stores will get cyberized, with much more dynamicity and flexibility , than of the IT enabled online systems. Dynamically changing of Product information, product pricing, with proof of quality test and material performance info will also be possible on the retail floor, multiple times in a day, without much of cost, logistics and time as it takes now.

When each Apparel is like a storybook with multiple chapters, starting from fabric, to designing to manufacturing and many more episodical moments, it is time to produce expandable reality content and play them in a suitable media where the content can be interacted with. As it is being observed that Content produced by someone, while getting transmitted on someone else's media platform, certain amount of rights and control goes away. A new avatar of Retail Stores is the way forward - Brick and Mortar Retail to be transformed into a Digital Media production and theater studio – **A PIXELICK AND VOXELART STUDIO.**

To know more, you can visit their website www.motionimager.com . If you want to partner with the aim to transform and build a strategy to make your Apparel Retail super smart and super intelligent, having an inclusive experience in real time for both your customers and backend designers and

manufacturers, Motion Imager are the only one who is working on the cloud connected Imaging tools to Imagecast & broadcast such high dimensional contents.