



# Packaging innovation is team work.

Different feels, materials and trend analyses  
need partnering specialists.

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Different feels, materials and trend analyses need partnering specialists

“Upgrading the touch and feel of a product and its packaging creates a holistic customer experience. The product needs to be spot on in touch, feel and surface finish.”

While packaging used to be the closing aspect of a product, we have come to an era where it creates the crucial first brand impression. Packaging solutions have become true extensions of the customers' brand expectations. And with modern high-speed coating technologies one can upgrade simple plastic or carton packaging into warm and seducing packaging that support your image or positively affect buying behaviour.

### Meet the experts

As touch is the second most important source of impressions, after sight, you may understand it is an important component in packaging. To develop the right touch you need a team of experts who measures the haptic impact within a 'context' of materials, functional structure and colour. We organised such a team and once this team of experts had formulated the correct set of customer insights, a so-called 'Haptic Innovation Process' was initiated.

First and foremost, one needs to identify 'feel' as it relates to humans in a uniform way. Is it possible to quantify the parameters that create feel in such a way that it ensures that haptic effects acquire a personal and contextual angle as well as an analytical component?

Although this posed a major challenge, the team of haptic experts devised the: **Haptic Innovation Process**

1. Map the development of feels
2. Quantify feel formulas
3. Visualise feels

### 1. Map the developments of feels

Mapping consists of two analysis components – the feel analysis and the hard analysis.

#### Feel analysis

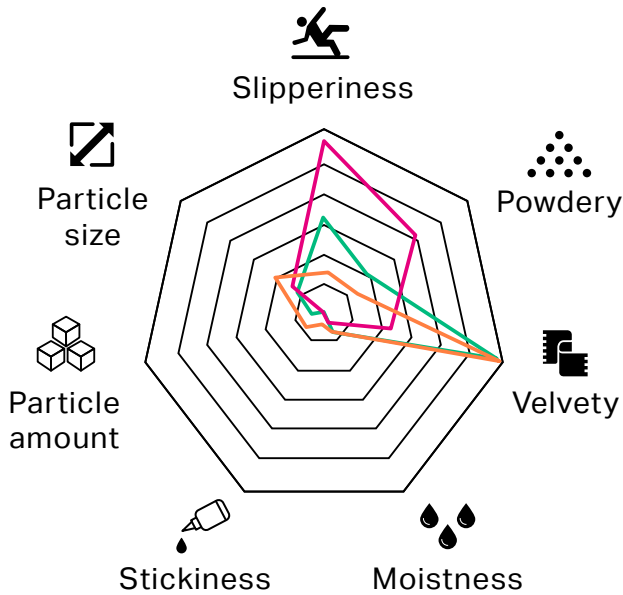
For measuring 'feel' we trained a haptic sensory panel, where the panellists were selected on sensitivity and ability to describe what they felt. Our haptic sensory panel is a true measuring panel, so you might describe it as a human analytical tool. To measure 'feel' you must break it down into 7 different haptic sensory attributes. Each attribute is measured against several reference materials so you can score them on a fixed scale. Examples of attributes are:

- **Slipperiness** (How slippery does the material feel)
- **Velvety** (Is there a sensation of fibres on the surface)
- **Moistness** (Does the surface feel moist or dry)
- **Stickiness** (How tacky does the surface feel)
- **Particle size** (How rough does the surface feel)





"By measuring many different materials, we have built a library with over 400 different 'fingerprints'."



By plotting these attribute scores in a spider graph for a specific substrate we could create a 'fingerprint' of how something felt. By measuring a broad range of reference materials like silk, velvet, wood, paper, sandpaper, rubber, etc. we connected haptic products with the feel of a reference material. It's also very illustrative that different materials indeed have very different 'fingerprinted' feel profiles. In the above graph silk and velvet are plotted.

### Physical and chemical analysis

The analytical team performs extensive physical and chemical analysis of the surfaces of the materials that were measured in the haptic sensory panel. By multidimensional scaling of both the sensory and the analytical data we could connect the physical and chemical differences to the haptic sensory attributes. In effect, this gives us the ability to develop surface finishing with a specific feel 'fingerprint'.

## 2. Quantify feel formulas

It's very encouraging that we can take a reference material and measure its feel 'fingerprint', and then have the understanding and ability to steer product development to closely match that 'fingerprint'.

We have used this capability to launch different haptic coating products.

## 3. Visualise feels

The various 'feels' that we developed are visualised and represented in swatches, flyers and presentations to create a haptic spectrum of possibilities for the market.

### Conclusion

When consumers hold a box, a package or something else in its hands, it interacts with that box or package, it stimulates the senses a person has. A person sees the colours of that box or package, he/she feels the textures, the weight or hear the sounds the box or package makes. These senses are crucial for any product, as the right sensory effects create the personality you want the product to have.

The application of coatings is enhanced enormously by a team of diverse specialists that succeeds in managing look and feel in a way that is distinguishable and measurable.

This enables you to define how coatings influence experience and feel, and how a coating or material can be applied to a product or packaging to enhance the right look and feel.





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<sup>1</sup>Please see the "Guidance on Use of Covestro Products in a Medical Application" document.  
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