

INH

lookbook

mekoprint

Create intuitive HMI solutions

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Welcome to our HMI Lookbook. At Mekoprint, we're passionate about designing and producing HMIs. We are constantly exploring new ways to make user interactions seamless and efficient. Our approach is straightforward: we listen, ask the right questions, and create intuitive, durable solutions. This lookbook showcases what's possible in HMI design, offering you new perspectives. So you can make informed decisions for your projects and see how we can bring your HMI ideas to life.

LIGHT 





your HMI

Shape





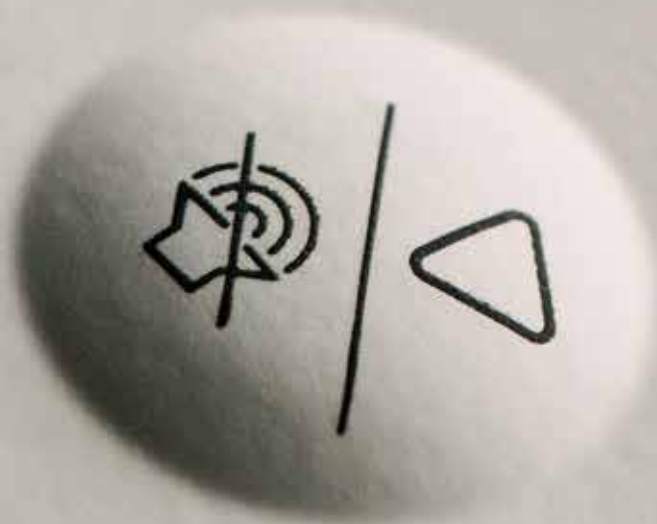
Enhancing UX and tactility with shaped keys

Shape your keypad controls to improve tactility and user experience. Unique 3D designs help users intuitively find controls. This is particularly important in case of operations in the dark or without looking at the keypad.

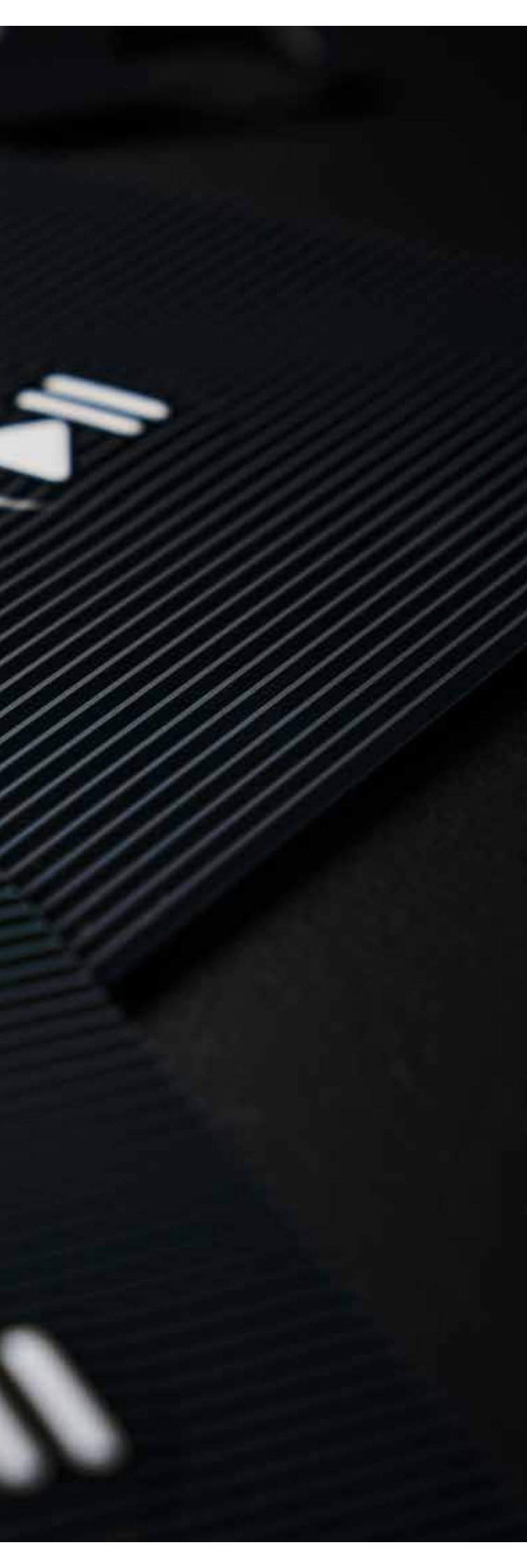


Custom moulding with silicone

With silicone rubber, you can shape the keys on the keypad exactly to your requirements. The keys are moulded to your design specifications, which means that you can raise them, separate them with recesses, or create unique 3D shapes. The options are countless.







Embossed keys for a seamless surface

Embossing adds shape and structure to a membrane keypad. You can customise the embossing designs to your specifications. Some of the most typical embossing designs are:

- dome and pillow embossing, raising the keys
- rim embossing, framing around the keys
- multi-level embossing, raising the keys and the symbols on the keys



025

361

361



to your HMI

Add **colour**



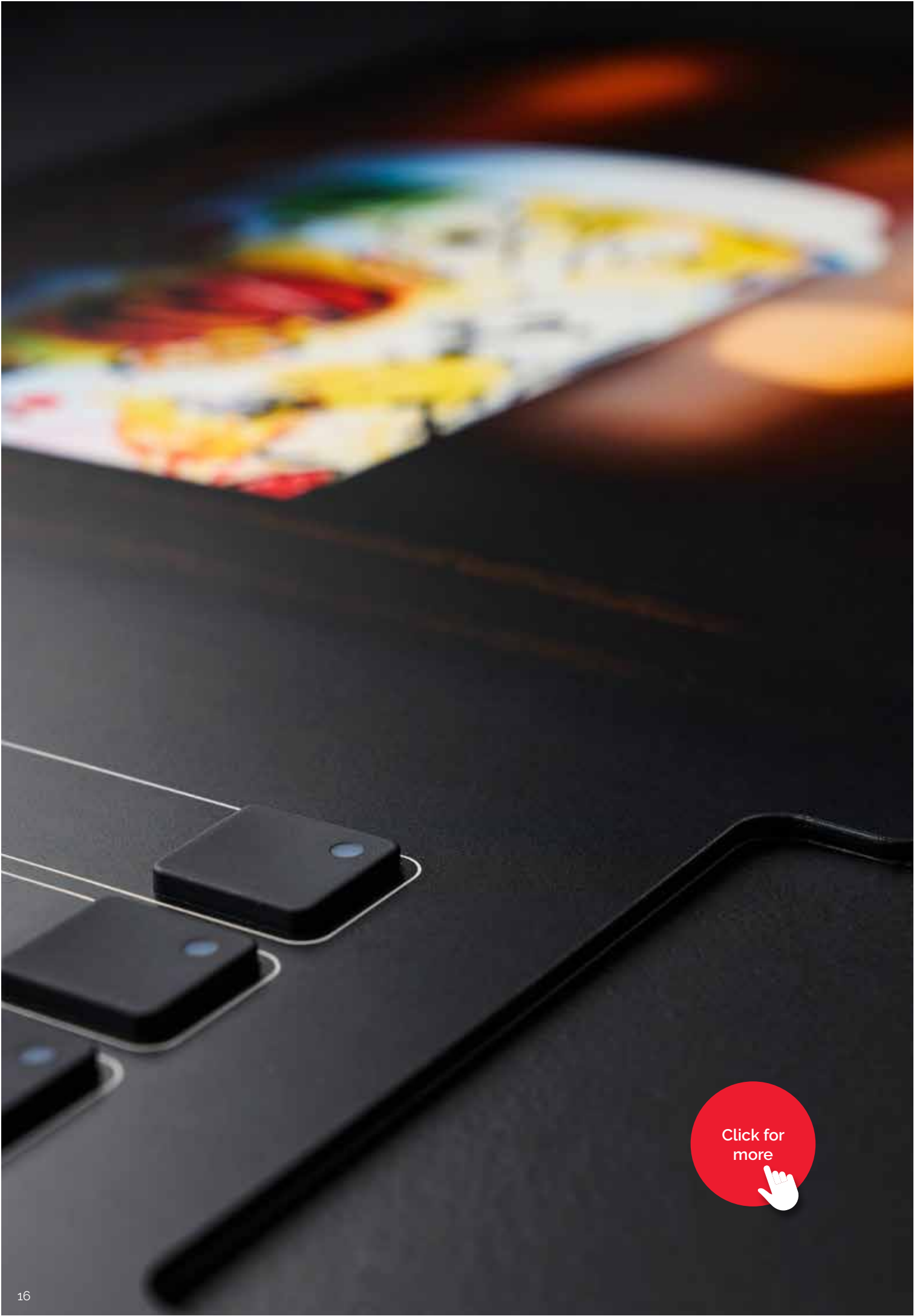


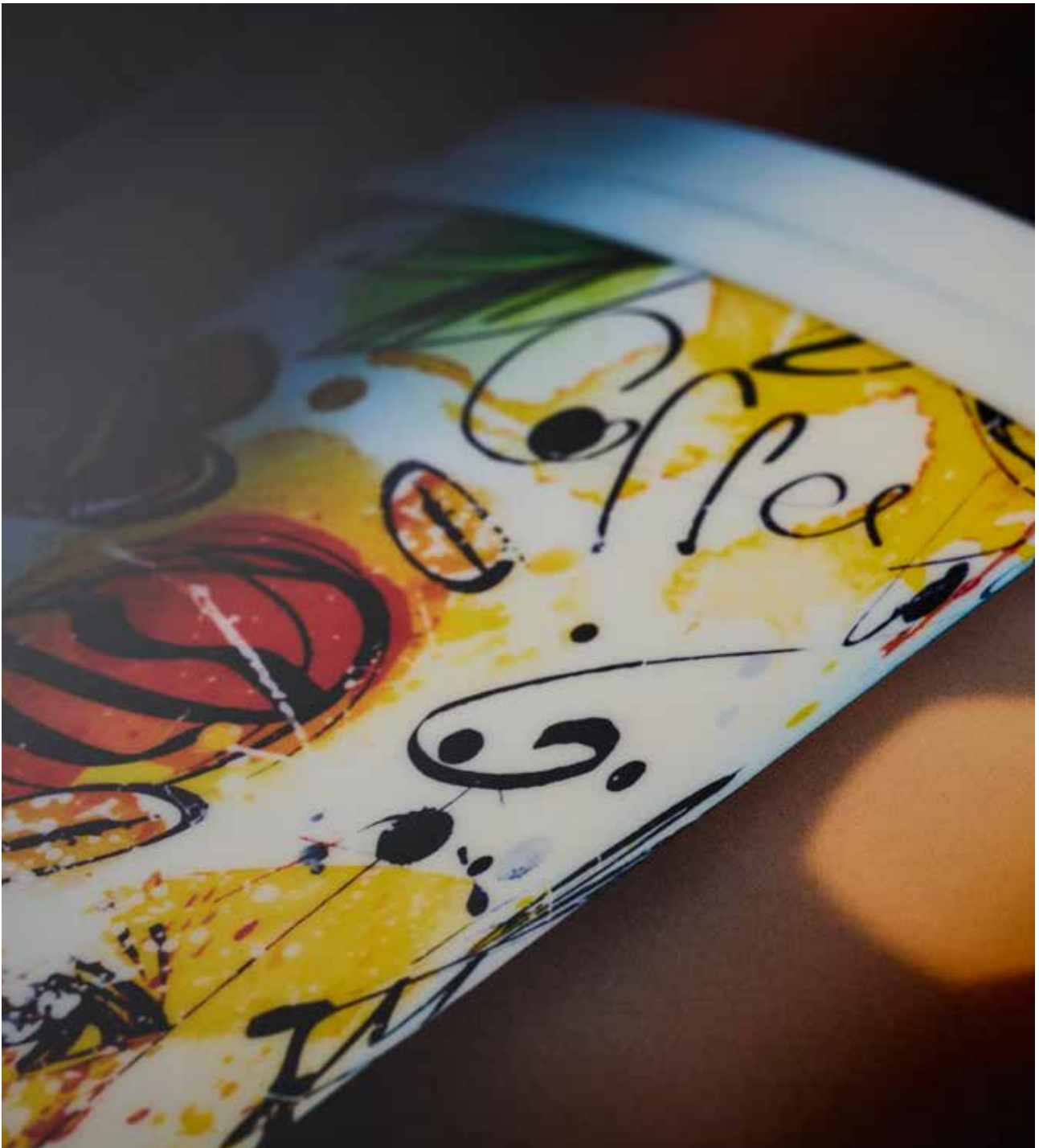
Colour moulding in silicone rubber

Colour helps reinforce your brand recognition and ensure clear and safe communication. You can add colour to a silicone rubber keypad by

- co-moulding two or more different colours
- spray-painting, with laser etching to achieve fine graphic details
- silkscreen printing for flat surfaces.

Our production technologies support colour systems such as RAL, NCS, and Pantone.





Digital printing for new possibilities

Digital printing offers endless possibilities for HMI design on foil and plate materials, such as polyester, polycarbonate, glass and acrylic. Achieve photorealistic graphics with intricate details, including gradients, colour blends, complex patterns, etc. You can combine digital and screen printing for detailed graphics and vibrant, lightproof colours.





Silkscreen printing for durable colours

Silkscreen printing is typically used to add colours. The silkscreen technique ensures accurate and efficient printing. This creates durable surfaces that offer strong protection in terms of e.g. UV resistance and scratch resistance. You can add metallic colours, translucent details, light blocking features and many other details. For complex graphic detailing, silkscreen printing can be combined with digital printing.





materials

Choose the right

Gloss contrasts for vibrance

Using contrast helps highlight important functions or controls of your device. Different gloss coatings or surface treatments with different textures are some of the creative ways to ensure play of contrasts in your product's keypad.







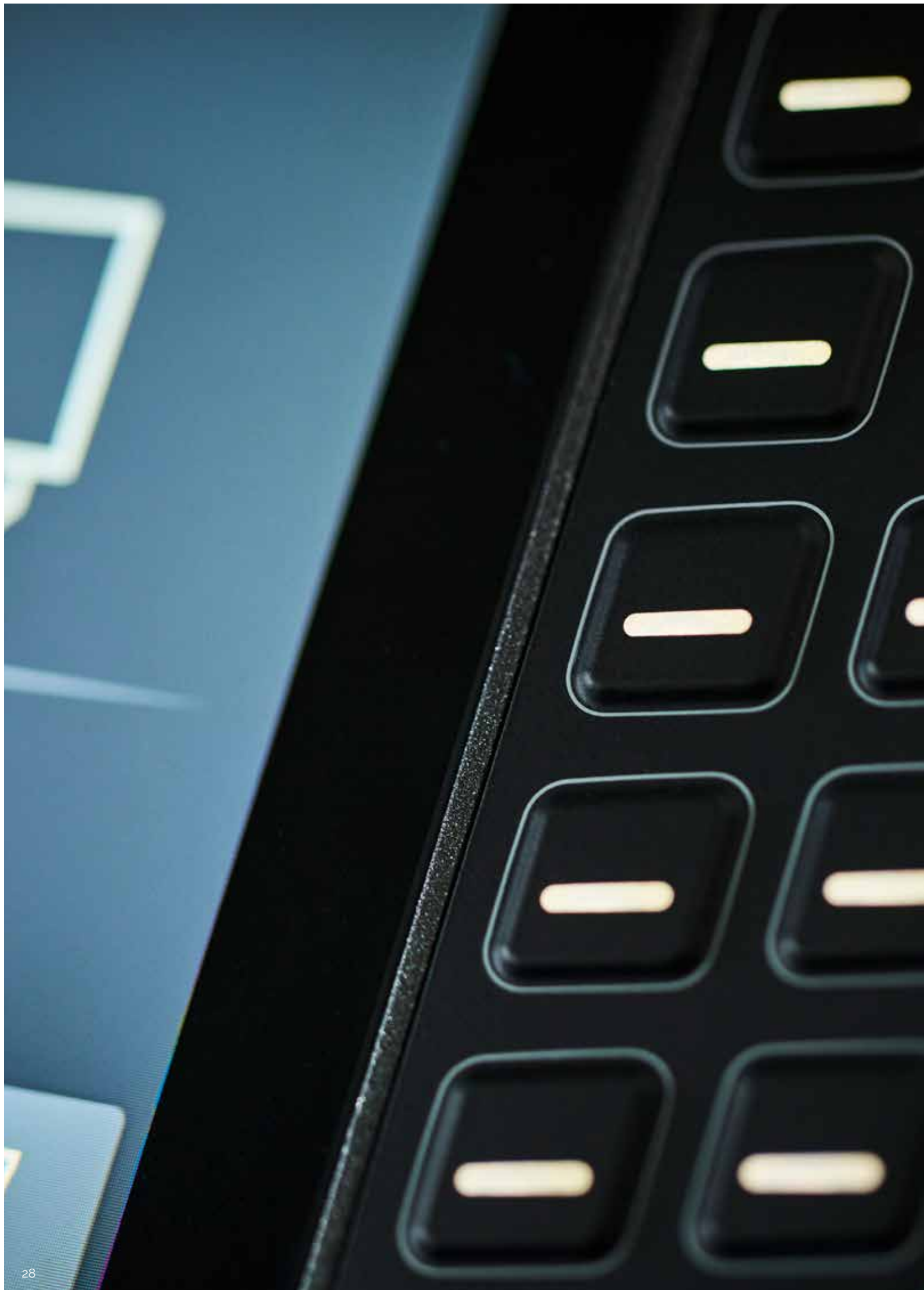


Combining materials for impact

Create contrasts by combining materials like silicone rubber keys with polyester front foils. This adds texture and improves the tactile feel, enhancing the user experience.



illuminate your HMI





Backlighting for safe interaction

Backlighting ensures convenient and safe interaction by illuminating controls in low light. It guides users, reduces errors, and enhances safety. Integrate LED backlighting for an intuitive interface that strengthens brand identity. With countless options for customised design features, you can make your device stand out with its unique lighting design.



Click for
more





Deadfront effect for clear controls

The deadfront effect reveals hidden controls when needed, ensuring clear communication. Achieve this on:

- polyester and acrylic plates with opaque inks
- translucent silicone rubber with laser etching



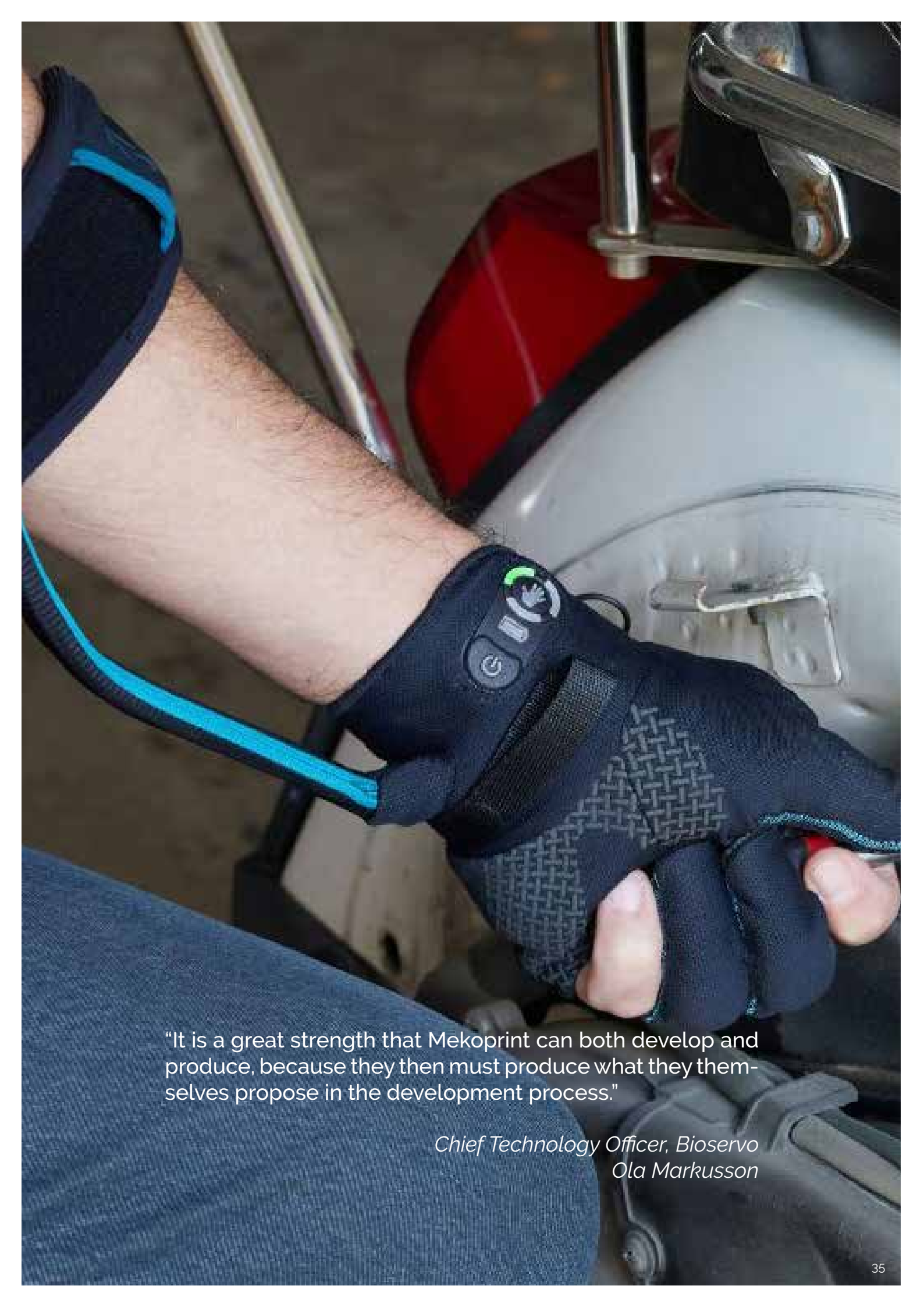
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Usability



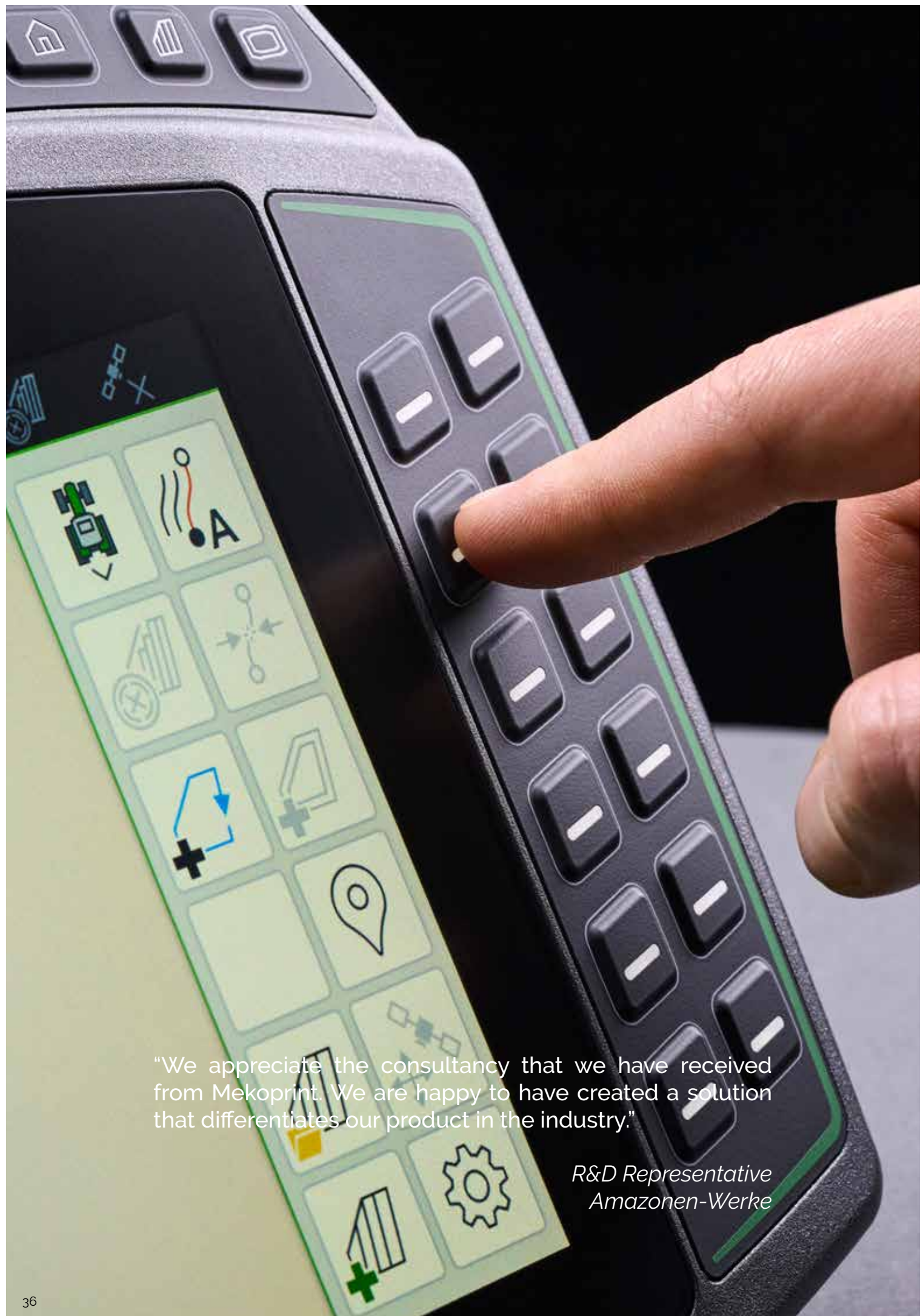
Wearable keypad for Bioservo

As Bioservo's HMI partner for their grip-strengthening glove, we engineered a complete, stitchable HMI solution. The keypad is bendable, intuitive, and watertight, exemplifying our commitment to innovative solutions.

A close-up photograph of a person's hand wearing a black, fingerless smart glove. A bright blue cable is attached to the back of the hand. The person is holding a metal tool, possibly a screwdriver, and is working on a motorcycle. The motorcycle has a red fuel tank and a silver engine. The background is slightly blurred, showing more of the motorcycle and the person's arm.

"It is a great strength that Mekoprint can both develop and produce, because they then must produce what they themselves propose in the development process."

*Chief Technology Officer, Bioservo
Ola Markusson*



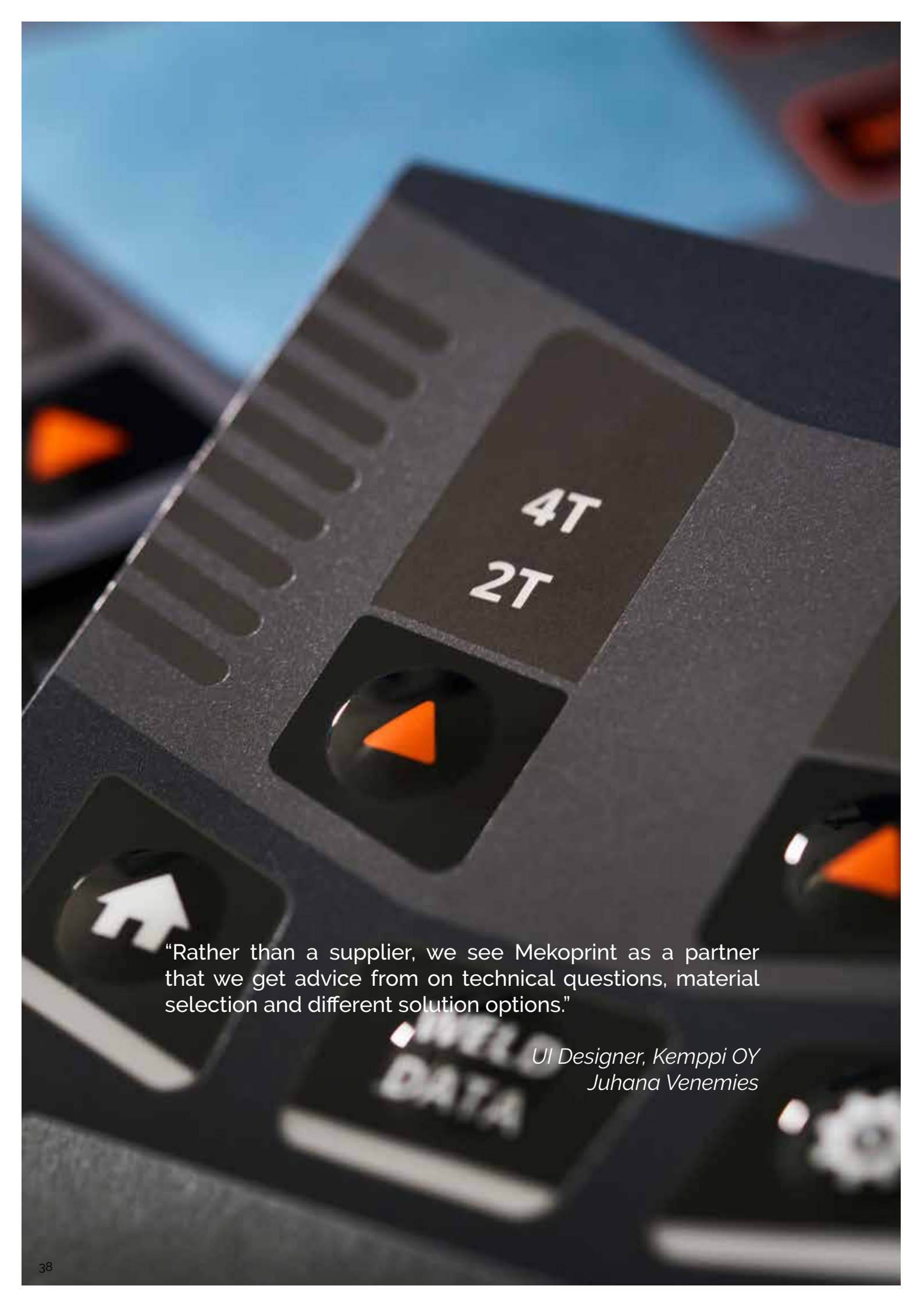
"We appreciate the consultancy that we have received from Mekoprint. We are happy to have created a solution that differentiates our product in the industry."

*R&D Representative
Amazonen-Werke*



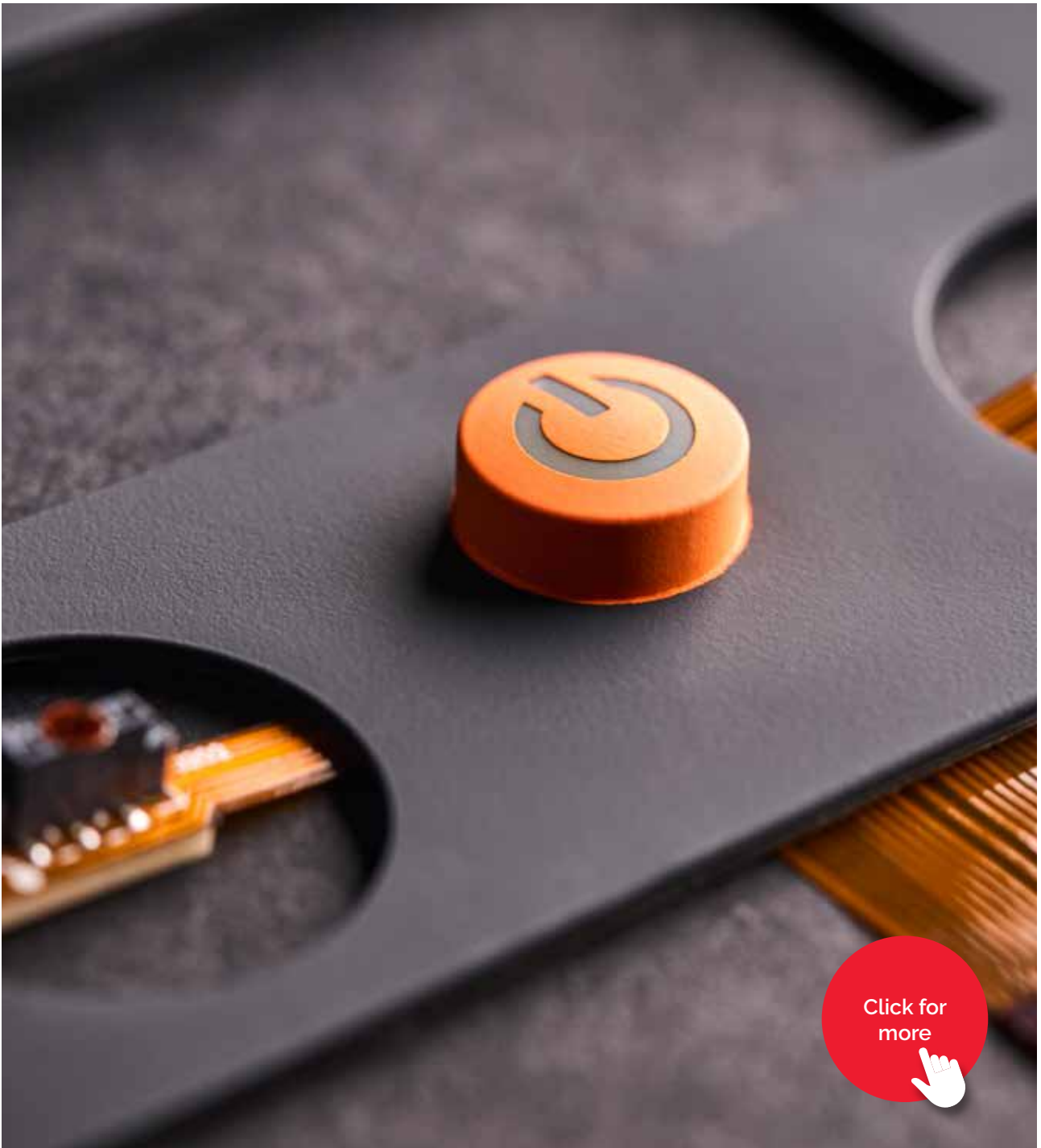
Robust keypad for Amazonen Werke

Amazonen-Werke partnered with us to create a durable, robust keypad for their new control terminals. The result is a control panel that can resist harsh weather and UV light, ensuring long-lasting performance and reliability in harsh agricultural environment.

A close-up photograph of a dark grey control panel. In the center, there is a vertical slider with a black cap and an orange triangular indicator. Above the slider, the text "4T" and "2T" is printed in white. To the left of the slider is a button with a white upward-pointing arrow. Below the slider is a button with the text "FIELD DATA" in white. To the right, another button with an orange indicator is partially visible. The background is a blurred blue surface.

"Rather than a supplier, we see Mekoprint as a partner that we get advice from on technical questions, material selection and different solution options."

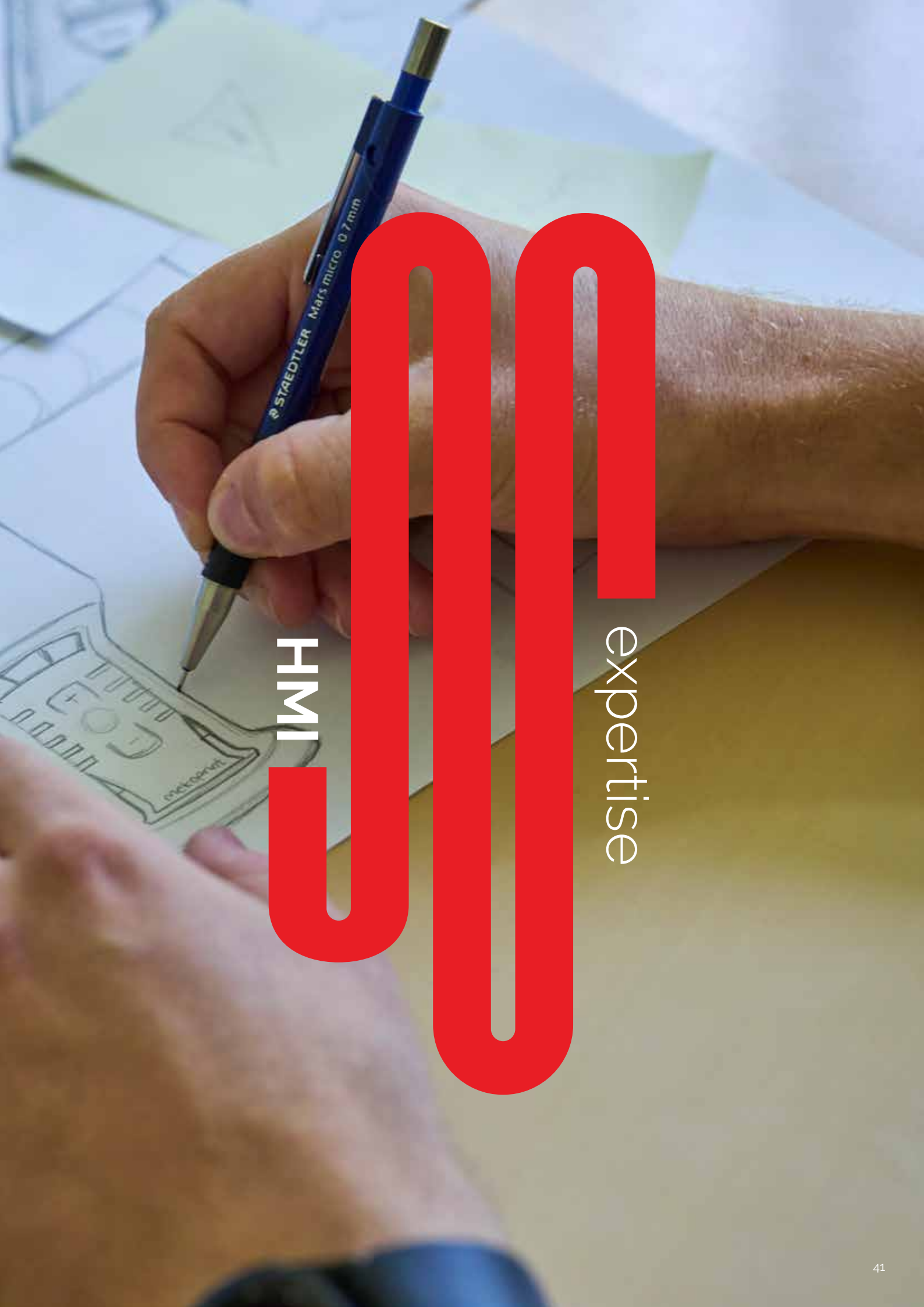
*UI Designer, Kemppe OY
Juhana Venemies*



Streamlining Kemppi's HMI solutions

Kemppi unified their keypad and overlay procurement with Mekoprint to boost design consistency and quality. This streamlined over 200 items, optimising materials and processes. The result: consistent quality, cost efficiency, and enhanced brand recognition.





HMI

expertise

HMI design services

Think of our design and engineering team as an extension of your own during the HMI development process. Whether you're facing time constraints, resource limitations, or simply need specialised HMI expertise, our specialists are ready to integrate into your development efforts seamlessly.

Our services are designed to support you at every stage, offering flexibility to match your specific needs. Whether you require full project management or targeted technical expertise, we provide the level of support that suits your unique situation.

To further enhance flexibility, our HMI services are structured into distinct development stages, allowing you to select and purchase service packages tailored to your current needs. This modular approach ensures you get exactly the support you require, when you need it.

Here's what we bring to the table:

- Expertise in HMI solutions, leveraging top-tier knowledge to create cutting-edge interfaces.
- Proven development processes, with structured approach to NPD and NPI.
- Cross-industry experience, drawing on best practices from a diverse range of industries.
- Danish design and engineering excellence, with focus on efficiency and sustainability.

By partnering with us, you'll benefit from:

- Streamlined processes, with fewer iterations and smoother workflows.
- Reduced risk, mitigating potential pitfalls with our experienced team.
- Accelerated time to market, bringing your products to market faster.
- Outstanding results, achieving the high standards you expect.



DISCOVERY

Project brief
Process proposal
Quote on design services

We start every project with a discovery phase to ensure a thorough understanding of your needs. This crucial step lays the foundation for all subsequent stages, no matter which part of your development process we join.

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IDEATION

Ideation workshop
Concept catalogue



DESIGN

3D files and renderings
Product specification
Unit & tooling price budget quote



MOCKUPS

Low fidelity prototyping
Mockup assessment



ENGINEERING

CAD files
Circuit layout
BOM list
Soft tooling & early prototypes
Unit and tooling price for series



RELEASE FOR PRODUCTION

Tooling drawings
Series manufacturing tool
Test fixture
Production drawings
Unique process description



LIFE-CYCLE ENGINEERING

End-of-lifetime activity
Tool replacement
Cost-down activities
Dual sourcing
New compliance requirements





Save time with the right competence match

Our team of engineers, industrial designers, and coordinators specialises in control panels and HMI solutions. We aim to complement your product development with specialist knowledge and lean processes, working together to create the best solution for your product.

When you place a project in our hands, expect a smooth journey from inquiry to mass production. With a structured development process and a fully digital production floor, we ensure transparent and efficient communication throughout. We value open and honest dialogue, keeping you informed and confident every step of the way.

Mekoprint group

Mekoprint is driven by curiosity, collaborating with our customers to co-create tailor-made mechanical, electronic, and electromechanical solutions. We leverage over 40 advanced technologies, including metal processing, printing, user interfaces, cable harnessing, and box-build assembly, ensuring exceptional quality across demanding industries.

With headquarters in Denmark and 10 production sites across Europe, our 700+ employees are committed to sustainability and innovation. Our digital production floor and global sourcing network enable us to stay agile and responsive. As a family-owned business, we focus on long-term partnerships, working together to support a brighter, more sustainable future for all.





Pushing for progress Leading new ways™