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OBJECTIVE

TESTING RESULTS

[illegible]

CUSTOMER PROBLEM AND BACKGROUND

Our team identified TukaTech’s suite of digital pattern-making tools—TUKAdesign and TUKA3D—as a robust solution. By integrating these tools into Hinchman’s production process, we aim to digitize and automate suit creation while enhancing accuracy, visualization, and customization without compromising quality.

REQUIREMENTS AND FINAL DESIGN



Our final design focused on digitizing eleven key jacket components using a fixed coordinate system to ensure geometric accuracy. Patterns were photographed and traced in TUKAdesign using the Virtual Digitizer and screen calibration tools.

The image shown is a 3D AI-generated model of our digitized racing suit, visualized in TUKA3D. This simulation enabled us to assess fit, identify tension zones, and revise designs prior to physical production—streamlining the process while preserving Hinchman's high standards for quality and customization.



We used TUKA3D's simulation environment to assess fit accuracy and tension across the suit design. Test results guided digital revisions, improving overall precision before physical prototyping.

CONCLUSION AND RECOMMENDATIONS

Our final recommendation is for Hinchman to fully integrate TUKAdesign and TUKA3D into their workflow. The digitization process we developed, including our coordinate system and Virtual Digitizer method, provides a replicable, scalable approach that maintains Hinchman's commitment to fit and performance.

TUKA3D proved to be a valuable prototyping tool, helping visualize fit and identify corrections before fabric is ever cut. TUKAmark's material optimization and grading tools also offer possible major efficiency gains.

While Hinchman may initially continue manual cutting, long-term investment in TUKAcut or TUKAjet systems could eliminate this step and maximize savings. We also recommend further testing across more body types to ensure inclusive fit.

Overall, this modernization significantly reduces labor, improves accuracy, supports scalability, and preserves Hinchman's legacy of craftsmanship in custom racewear.