

# Continuous Glucose Monitoring



## Client

Dexcom

## Practice Areas

Smart Medical Devices

## Core Disciplines

Mechanical Engineering

Systems Engineering

Transfer to Manufacture

## Challenge

Dexcom needed to resolve complex design behaviors, manage manufacturing variability, and support large-scale production across multiple generations of CGM devices – all while maintaining aggressive timelines for new product releases.

## Solution

Triple Ring deployed expertise in device development, mechanism analysis, finite-element simulation, and empirical testing to support the design and optimization of Dexcom's CGM platforms. Using system-level modeling and complex empirical characterization, the team enabled Dexcom to model manufacturing variability across hundreds of thousands of virtual devices – identifying unforeseen design sensitivities early, when changes were least costly.

## Client Impact

- Resolved undesirable device behaviors and improved model accuracy across multiple device generations
- Shortened development timelines and accelerated release of successive CGM platforms
- Enabled reliable, high-volume manufacturing at scale
- Supported the award-winning G6 and the fully redesigned G7 applicator – a landmark advance in device integration and usability

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