

tinyML[®] Summit

Enabling Ultra-low Power Machine Learning at the Edge

Products and applications enabled by tinyML

March 28 – 29, 2023



www.tinyML.org

The P&G logo is a dark blue circle with the letters 'P&G' in white, serif font. It is positioned on the left side of the slide, overlapping a blue background with a pattern of small circles that radiate from the left edge.

P&G

Qeexo's AutoML to accelerate data science adoption and value

Grant Striemer

Stephanie Pavlick (TDK Qeexo)

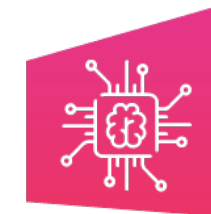




ENABLING INTELLIGENCE AT THE EDGE

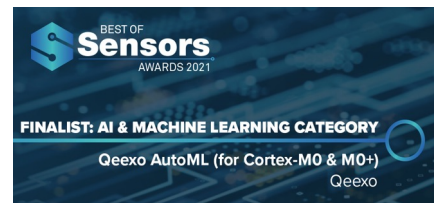
About Qeexo

- 2012: Spun out of Carnegie Mellon University
- 2012 – 2018: Developed machine learning applications for mobile / touchscreen market
- FingerSense, TouchTools, EarSense
- Optimized for low-latency, low-power
- 2019: Qeexo AutoML external availability
- 2023: Acquired by TDK



AutoML

**NO CODE MACHINE LEARNING PLATFORM
FOR tinyML**



Qeexo AutoML: Key Customer-Driven Enhancements

- Assisted Segmentation
- New Hardware Platform Support
 - Nicla Sense ME (MCU and ML-accelerator)
 - TDK i3Micro (limited availability)
 - P&G STM32WB5MMG (only currently available to P&G users)
- Automatic time-series sensor data augmentation



About

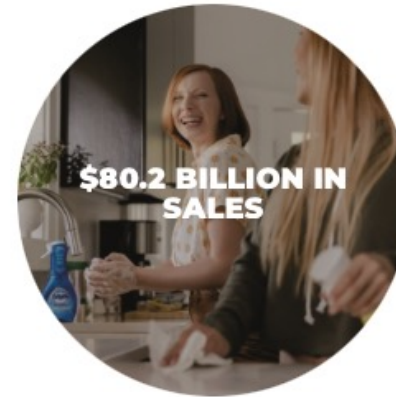
Grant Striemer
Director, Corporate R&D

15+ years spanning...

- Open Innovation
- Global Swiffer Packaging & Devices
- Smart Products: Opte, Lume
- Startups
- 30+ patents



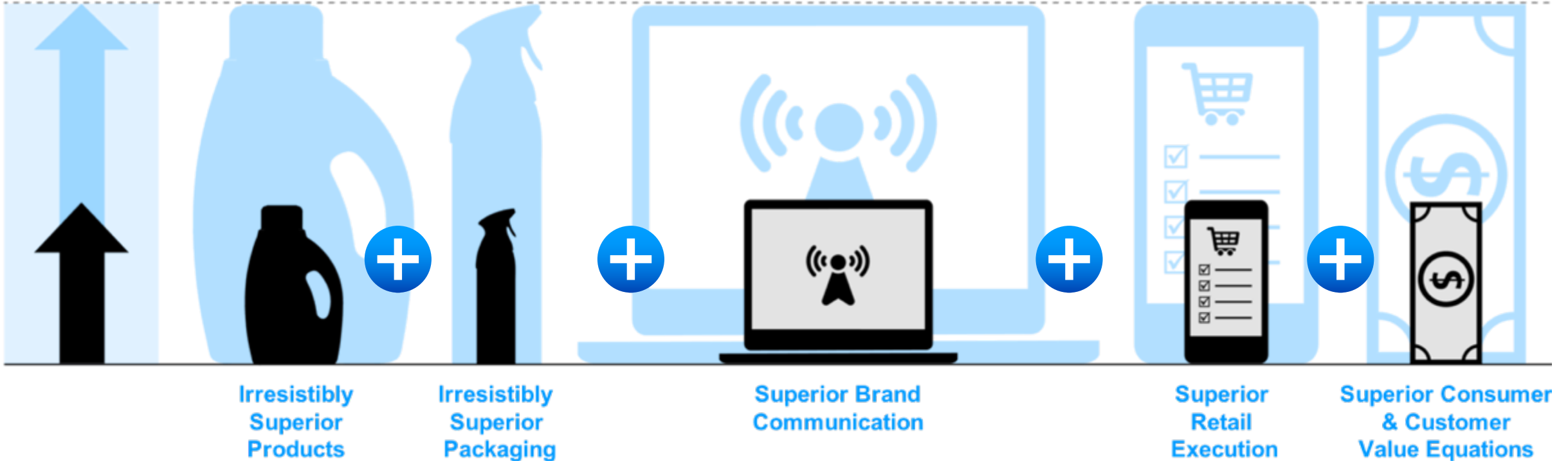
A Company of Leading Brands



SUPERIORITY DRIVES GROWTH

*New Standard
of Excellence*

NEED SUPERIORITY ACROSS ALL ELEMENTS



Digital Innovation in Consumer Goods

AI is part of our **digital transformation strategy to disrupt how we innovate** (faster/better/cheaper) in the CPG industry which is helping drive design of irresistibly superior products and experiences for our global consumers.

In R&D, we use AI to...

**Understand
Consumer Needs
Better**



**New Product
Experiences**



**Make Products
Better**



Examples of AI in P&G

AI Toothbrush

Motion Sensor Data



AI Manufacturing

Computer Vision



Paul Thomas, PE
Procter and Gamble

Paul Thomas, P&G Engineering

Excerpt from AIA Conference

Growing practitioner level AI know-how

The Adoption Journey of a Citizen Data Scientist (Product Researchers)

WHY
what
how



WHY
WHAT
how



WHY
WHAT
HOW

High Category
Knowledge
Unmet Need

Define Problem
to Solve
Show Value

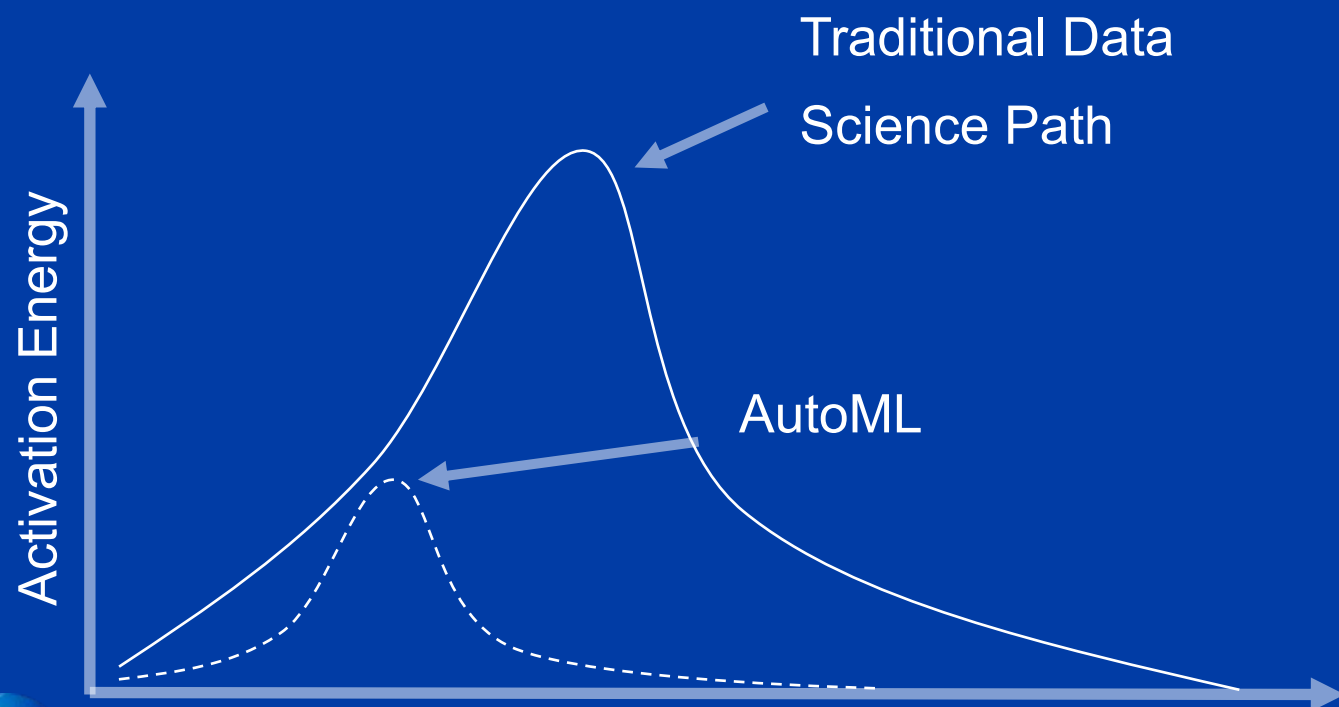
Integrate into
Workflow
Grow
Knowledge



Open Innovation

STRATEGICALLY PARTNERING EXTERNALLY WITH STARTUPS/COMPANIES/ACADEMICS TO LEVERAGE AND BUILD NEW DATA & AI CAPABILITIES

P&G is leveraging Qeexo's Auto Machine Learning tool to help enable this broad innovator community to develop, manage and deploy new algorithms.





Improving everyday life.

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