Creating a Research Insights Engine
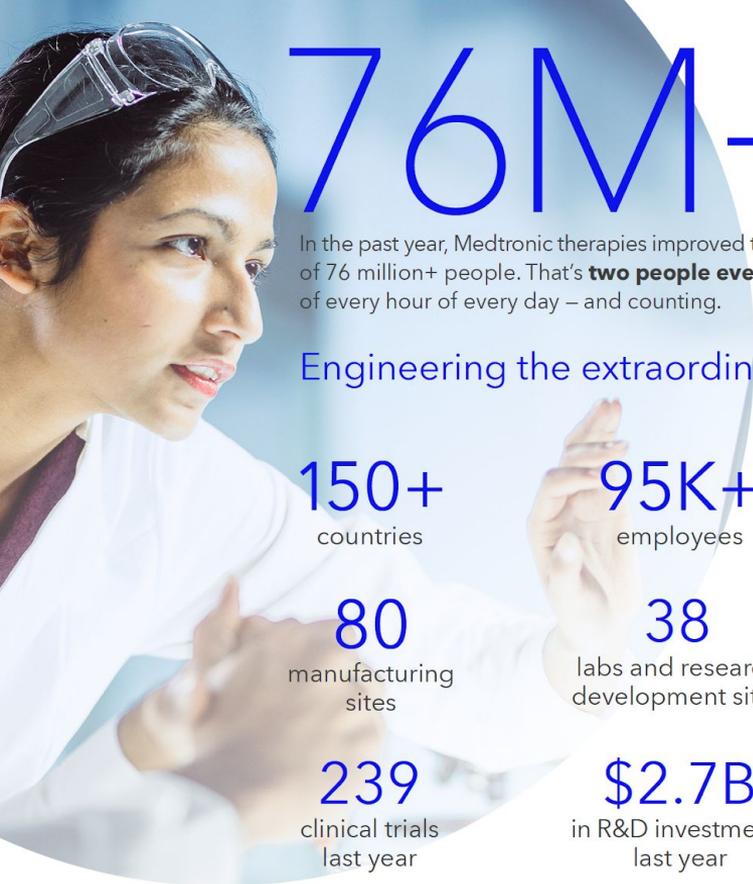
Linda Z. Massie & Roz Johnson
Medtronic

Linda Z. Massie

Distinguished
Designer
Medtronic

Roz Johnson

Principal
User Experience Researcher
Medtronic

76M+

In the past year, Medtronic therapies improved the lives of 76 million+ people. That's **two people every second** of every hour of every day — and counting.

Engineering the extraordinary

150+
countries

95K+
employees

80
manufacturing sites

38
labs and research development sites

239
clinical trials last year

$2.7B
in R&D investments last year

12.9K+
scientists and engineers

49,967
active patent matters

Our dedication to transforming lives starts here

Better outcomes for our world

Life-transforming technologies

Experiences that put people first

Insight-driven care

Beyond products: Integrated health solutions (IHS)

We partner with hospital management and medical leaders to transform care pathways and clinical operations, with a shared goal of:

- Improving efficiency and outcomes
- Increasing patient and staff satisfaction
- Optimizing cost

With our extensive experience across and within regions, we provide proven and highly effective solutions that can be quickly tailored to providers' specific needs and generate value now — and for the future.

Positive impact on complex and challenging conditions

70+
conditions in the human body treated with our therapies

2
**people every second** have their lives improved — and counting

Public-private partnerships

Increasing patient access in multiple communities aligns with the core of our Mission. These public-private partnerships – with outcome-oriented business models – create mutual benefits by making the most of Medtronic skills, expertise, and assets through the appropriate transfer of risk. They drive our globalization strategy and actively contribute to the international push for universal health coverage. With jointly defined objectives, they address health system challenges efficiently by increasing access to therapy innovation, raising quality, and delivering improved outcomes.

Learn more at Medtronic.com

Medtronic
Engineering the extraordinary
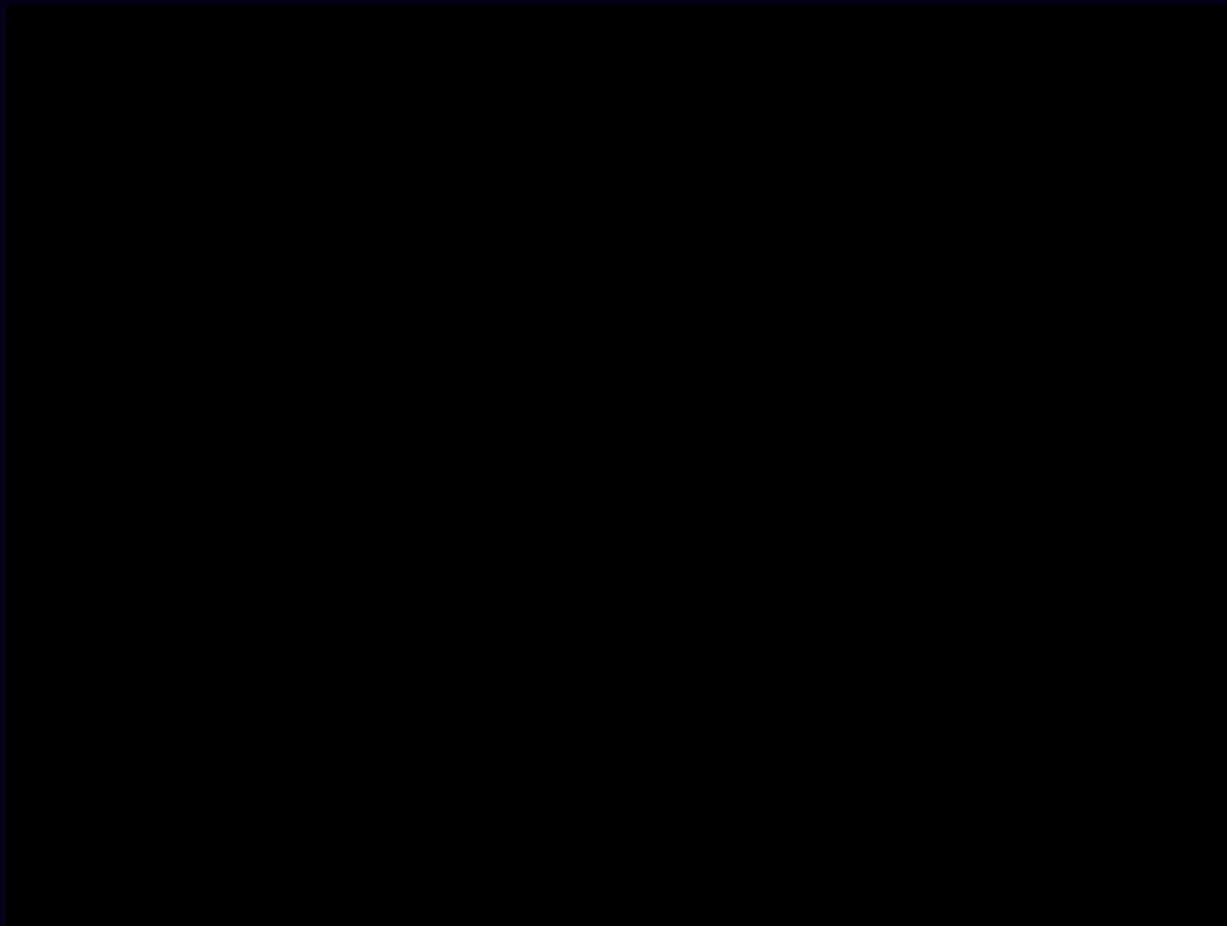
Agenda

- Our Process

- Problems = Opportunities

- Creating an Insights Engine

- Results

DESIGN
THINKING
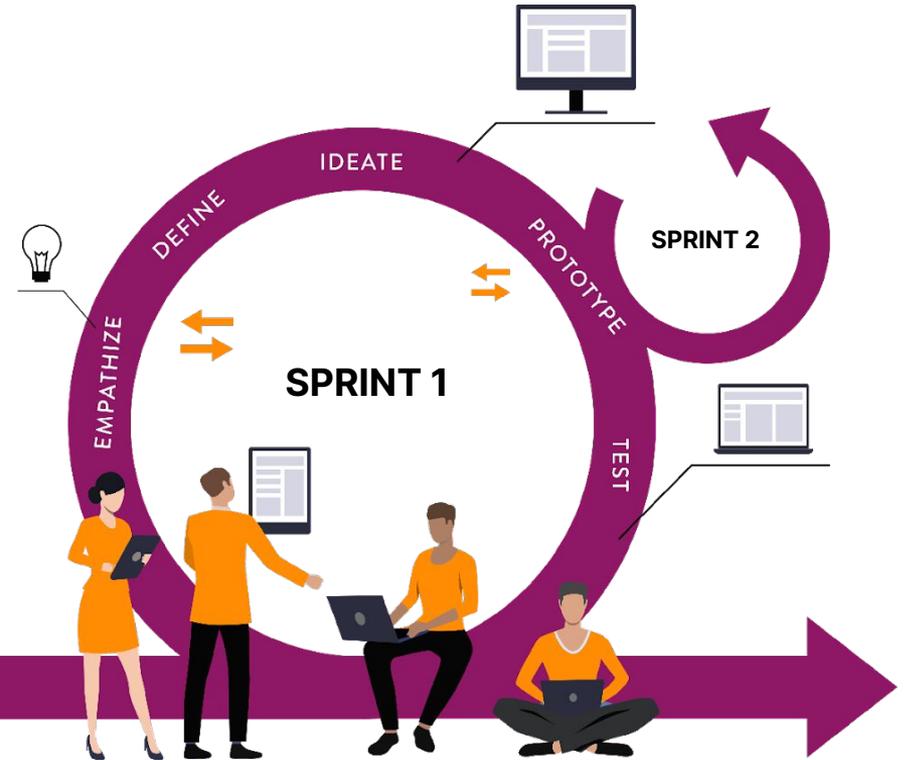
+

LEAN

+

AGILE

EXPLORE
THE **PROBLEM**

BUILD THE
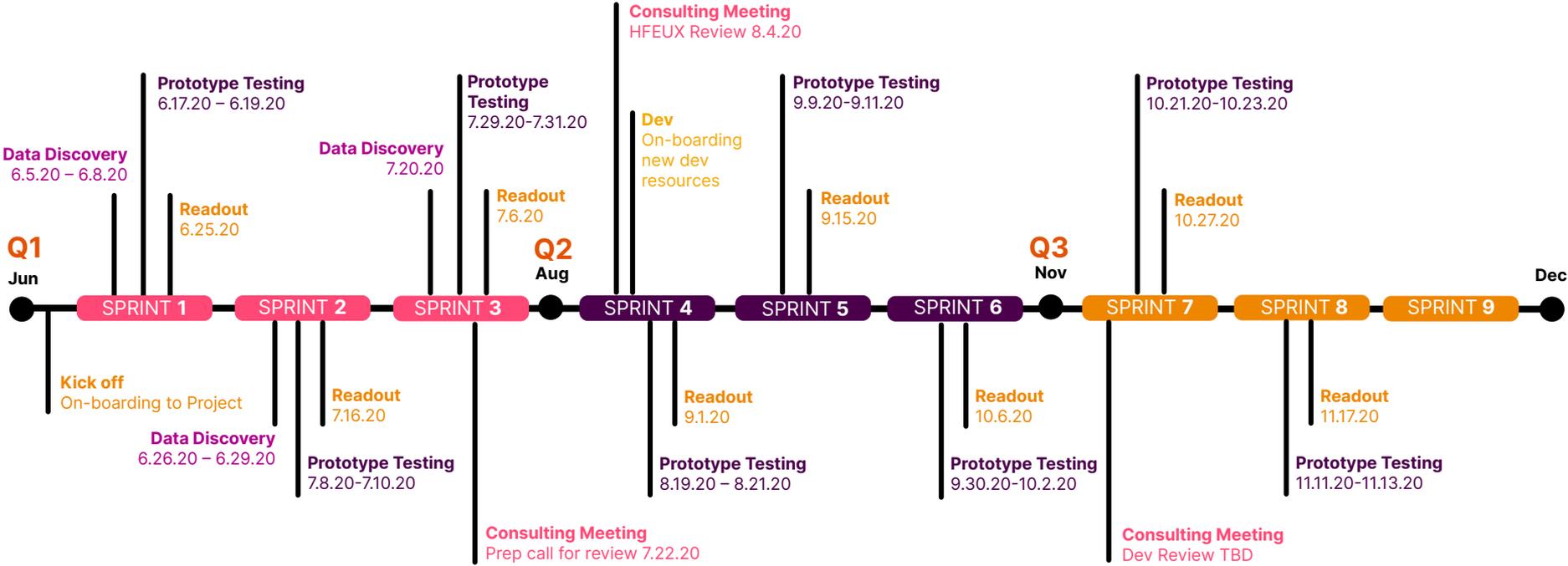**RIGHT** THINGS

BUILD THE
THING RIGHT

How We Work – Continuous Learning

To drive continuous **innovation**, we must have a constant **connection** and **access** with our end-users.

What does that look like?

Consulting Meeting
HFEUX Review 8.4.20

Prototype Testing
6.17.20 – 6.19.20

Prototype Testing
9.9.20-9.11.20

Prototype Testing
10.21.20-10.23.20

Prototype Testing
7.29.20-7.31.20

Data Discovery
6.5.20 – 6.8.20

Dev
On-boarding new dev resources

Data Discovery
7.20.20

Readout
7.6.20

Readout
9.15.20

Readout
10.27.20

Readout
6.25.20

Q1
Jun

Q2
Aug

Q3
Nov

Dec

| SPRINT **1** | SPRINT **2** | SPRINT **3** | SPRINT **4** | SPRINT **5** | SPRINT **6** | SPRINT **7** | SPRINT **8** | SPRINT **9** |

Kick off
On-boarding to Project

Readout
7.16.20

Readout
9.1.20

Readout
10.6.20

Readout
11.17.20

Data Discovery
6.26.20 – 6.29.20

Prototype Testing
8.19.20 – 8.21.20

Prototype Testing
9.30.20-10.2.20

Prototype Testing
11.11.20-11.13.20

Prototype Testing
7.8.20-7.10.20

Consulting Meeting
Prep call for review 7.22.20

Consulting Meeting
Dev Review TBD

● Discovery Interviews   ● Prototype Testing   ● Consulting   ● Results & Deliverables   ● On-boarding Dev

Quantitative

Tells us what is **happening**

Tests hypothesis

Helps direct **qualitative**

Asks '**why**'?

Formulate hypothesis

Make changes & retest with **quantitative**

Qualitative

PEOPLE

PERSONA TRENDS

Immersed in Tech

- Understand how phone works and use apps daily
- High self-rating on comfort with technology
- Own wearable technology like FitBit, Kardia, Apple Watch
- Use other smart devices like blood pressure devices, scales, and CPAP machines
- Spend considerable time reading and researching daily, leveraging various devices (iPhone, tablet, laptop, etc).
- Background in IT or education

Data Driven

- Preference for no visual clutter and limited number of different colors
- Desire for information to be made clear and obvious
- Need to see information to understand it
- Use of iconography, charts, and graphs helps them
- Progressive disclosure of information helps cognitive load
- Appreciation for questions that are easy to answer, "don't make me think too hard"

Health Conscious

- Currently lead very active lifestyles and keep a close eye on their activity
- Interested in clinical research because of its potential to improve health
- More interested or willing to participate if approached by physician or Medtronic
- Accustomed to medical terminology, self-proclaimed as more knowledgeable than the "common/average person"
- Background in medical field or active profession

Motivated to Help

- Highly internally motivated: "This would be a good part of taking care of myself"
- React better to positive reinforcement in comparison to negative reinforcement
- Answering survey questions will help them understand their condition better and help others too
- Motivated to help people; "seeking an opportunity to give back"

Problem = Opportunity

Having a continuous **feedback loop** requires a directory that is constantly being added to and have fresh data.
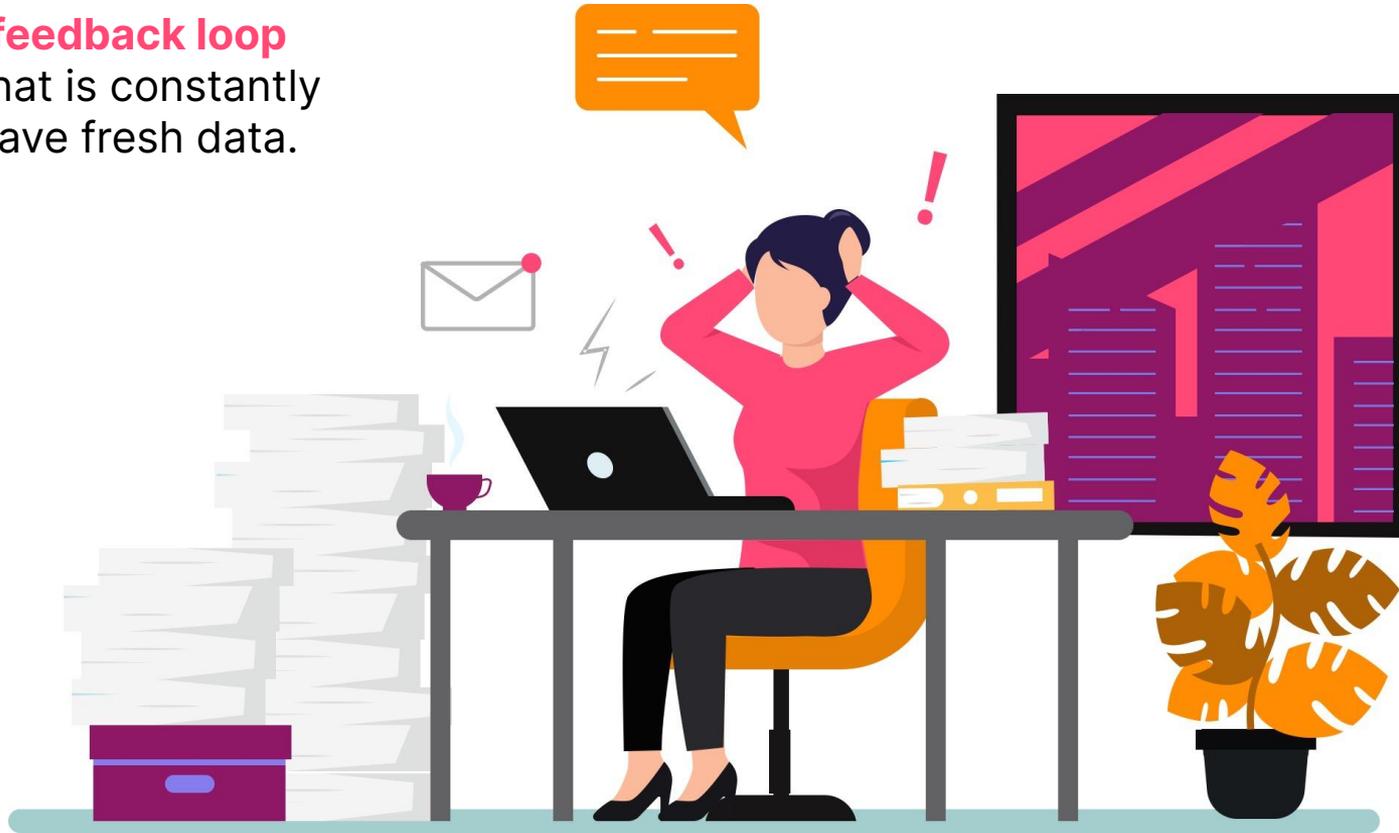
The Goal
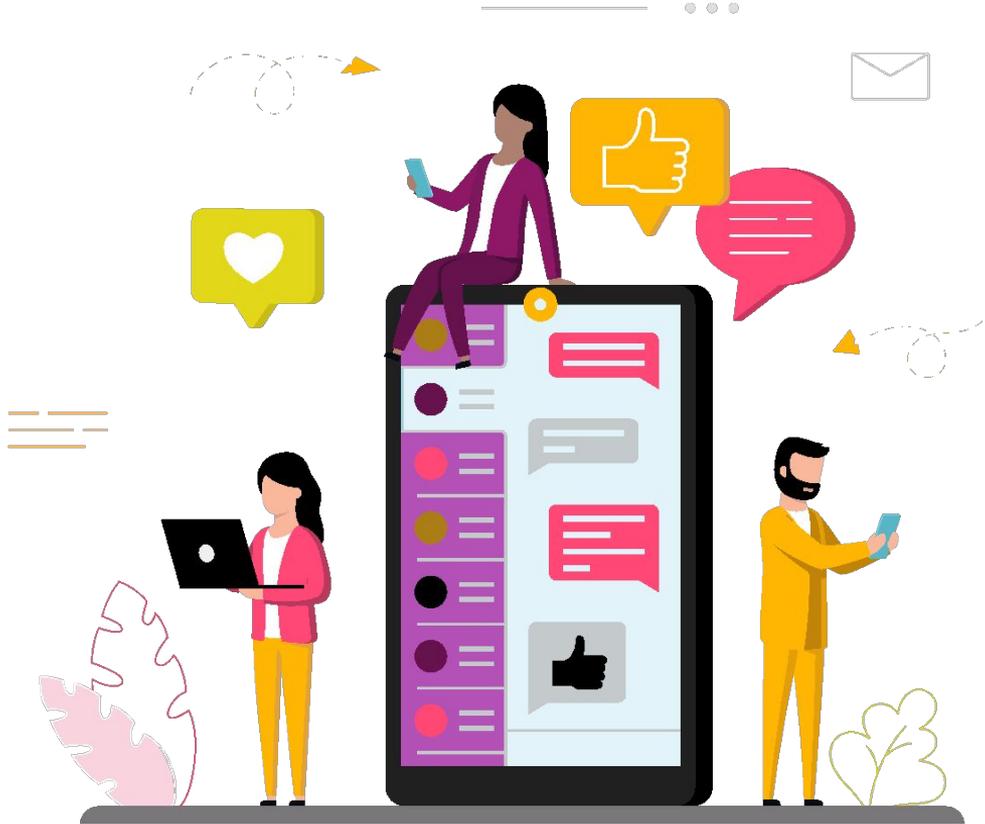
Amplify speed and quality of insights to enable more customer and patient-focused decision-making.

Diversity of Use-Cases

- Paid / unpaid research

- In-person or remote

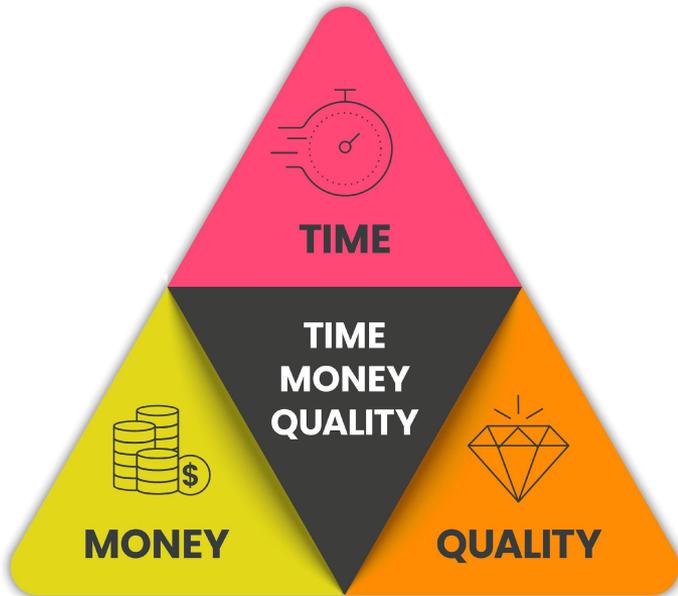- Surveys of Interviews

- Patients or Healthcare Providers

Creating a Continuous Feedback Loop

The Solution

Implement a **research recruitment & scheduling process** to minimize the need for third-party recruiters.

Key Objectives

As compared to third-party recruiters, we set out to:

1. **Improve** participant quality

2. **Reduce** time to recruit

3. **Reduce** cost of research

Improve Quality

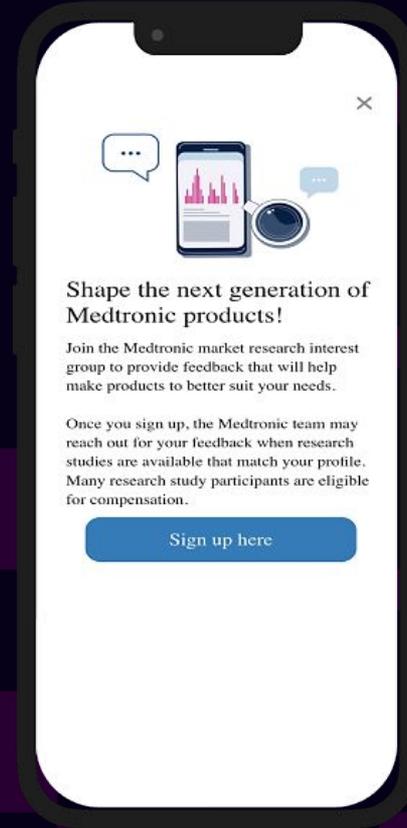**Design a solution that enables...**

- Participant Recruitment

- Diverse Sampling

- Participant Profiling

- Participant Screening

PENDOMONIUM 2023

Participant Recruitment

Use Pendo guides to prompt patients to sign up for Medtronic's research panel!

~100 patients sign up monthly!

Shape the next generation of Medtronic products!

Join the Medtronic market research interest group to provide feedback that will help make products to better suit your needs.

Once you sign up, the Medtronic team may reach out for your feedback when research studies are available that match your profile. Many research study participants are eligible for compensation.

Sign up here

Participant Profiling

Design for Commonalities …

- Research Objectives

- Research Design

- Inclusion Criteria

- Exclusion Criteria

Consider …

- Feasibility & Compliance

Reduce **Time**

In-house research panel enabled us to integrate & automate:
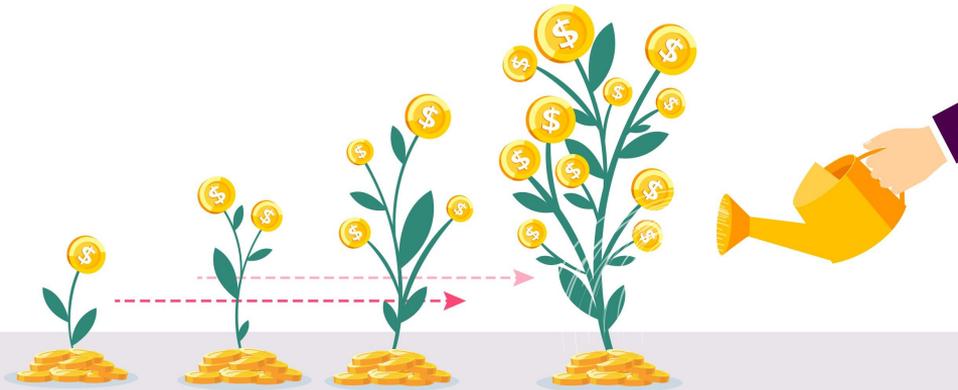
- Informed Consent
- Participant Scheduling

Time to schedule went from
1 – 3 months to 3-7 days!

PENDOMONIUM 2023

Reducing **Cost**

Saving ~$16k/month... and growing!

Eliminated Reliance on Third-Party Recruiters

(US Research)