**ENGINEERING CLARITY:**

# Transforming Hearing Aid Fitting with Intuitive Software Solutions

## CLIENT OVERVIEW:

Our client is an Italian hearing aid innovator with a strong international presence, producing 100% Made-in-Italy devices. Driven by values of transparency, credibility, and passion, their mission centers on advancing audiological knowledge and global hearing prevention. They partner with Havana's Institute of Neurosciences, operating Latin America's most advanced audiological center.

## THE CHALLENGE:

The client's legacy fitting software suffered from two critical constraints that impeded global audiology workflows:

> Fragmented legacy software requiring excessive clicks for basic navigation

> No role-based access control for different user types (admin/audiologist/developer)

> Missing critical features: Autofit, Tinnitus management, and patient history tracking

> Inability to configure hearing aids for different sound environments

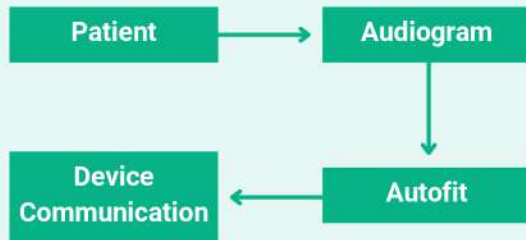> Lost source code, preventing system upgrades or migrations

## OUR APPROACH:

To address these challenges, we delivered a comprehensive software transformation:

### End-to-End Workflow Design:

Created a unified patient journey:

```
Patient  →  Audiogram
                 |
                 ↓
Device      ←  Autofit
Communication
```

### Role-Based Access System:

Implemented tiered logins with specialized permissions:
- Admin: Manages audiologist accounts
- Audiologist: Creates patient profiles and fittings
- Developer: Adds/configures hearing products

### Advanced Clinical Capabilities:

Added 6 new features: Autofit, Tinnitus management, Patient History, Data Logging, Attack/Release, Frequency Equalization

### Technical Modernization:

Rewrote software using WPF Framework (C#) with OnSemi Rhythm hardware integration

### UI/UX Revolution:

- Applied Adobe XD for user-centric interface design
- Implemented navigation principles: User control, cognitive load reduction
- Conducted visual research across leading hearing aid brands

### Agile Requirement Delivery:

Implemented 42 client requirements through iterative development

## THE BUSINESS IMPACT:

The transformation delivered measurable improvements in audiological care:

**Accelerated Clinical Workflows**
Eliminated multi-click navigation bottlenecks through intuitive UI design

**Enhanced Treatment Capabilities**
Enabled Environment-specific hearing configurations for diverse soundscapes

**42 Requirements Delivered**
Delivered 100% of requested capabilities in a single release

**Operational Control**
Enabled parallel workflows through role-based access tiers

**6 Clinical Features Enabled**
Introducing advanced fitting features, including Autofit and Frequency Equalization

**Global Standardization**
Supported deployment across international clinics, including Havana's advanced audiological center

**MICROGENESIS**